

Highway 1 Seaside Creek Storm Damage Repair Project

State Route 1 in Mendocino County

01-MEN-1-PM 70.2/70.8

Project No. 01-0000-3331-1

EA 01-474901

Initial Study with Mitigated Negative Declaration



Prepared by the
State of California Department of Transportation

August 2011



SCH:
01-MEN-1 PM 70.2/70.8
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INITIAL STUDY with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

19 November 2010
Date of Approval


JOHN D. WEBB, Office Chief
North Region Environmental Services

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to make storm damage repairs to State Route (SR) 1 in Mendocino County. The project is located in Mendocino County on Highway 1 near Westport between post mile (PM) 70.2 and 70.8.

Due to heavy winter rain and a failing retaining wall, the roadway prism has failed. The scope of work consists of realigning the roadway, constructing a 700 ft. long Soldier Pile Tieback (SPTB) wall with a modified ST10 barrier with a bicycle rail, replacing the metal beam guardrail (MBGR), replacing the culvert at PM 70.65, relocating overhead utilities and rebuilding the structural section. An existing private driveway near PM 70.65 would be replaced with a pull-out. Temporary Best Management Practices (BMP's) would be implemented to control sediment and pollutants.

Determination

Caltrans has prepared an Initial Study for this project and has determined from this study that the proposed project will not have a significant effect on the environment for the following reasons:

The proposed project will have **no effect** on air quality, agricultural and forest resources, floodplain, greenhouse gas emissions, land use and planning, mineral resources, noise, hazards and hazardous materials, population and housing, public services, recreation, transportation and traffic, and utilities and sewer systems;

The proposed project will not increase seismic hazards or induce growth;

The proposed project will have **no significant effect** on hydrology and water quality, geology and soils, and visual/aesthetics;

The proposed project will have no significantly adverse effect on Biological Resources, Wetlands and Cultural Resources because the following mitigation measures would reduce potential effects to insignificance:

- Temporary impacts to wetlands and other waters of the U. S. will be mitigated through the restoration of the project area to pre-project conditions. Wetlands that are temporarily impacted during construction will be revegetated upon completion of project construction. Seeds or plant material from species that are appropriate for the project vicinity will be planted in these areas.
- Permanent impacts to wetlands and waters of the U.S. will be mitigated by creating wetlands where the existing highway is realigned to the east, adjacent to existing wetlands, or by creating wetlands at a USACE or CCC approved location off-site, or through a combination of these efforts. Mitigation may also include restoration of wetlands, including removal of invasive plant species, on the adjacent Coastal Land Trust.
- A Mitigation and Monitoring Plan (MMP) will be developed for the project and will outline the measures listed above as well as any new measures deemed appropriate given the final engineering drawings for the project.
- Caltrans will resolve potential adverse effects to the sites by executing a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO). The MOA, which includes stipulations to take into account the proposed project's effects on historic properties, calls for (1) archaeological excavations within the impacted portion of CA-MEN-1818/H as detailed in a data recovery plan and (2) establishment of ESAs to protect those portions of CA-LAK-1818/H and -3382/H outside of the ADI from inadvertent damage during project construction. The MOA was recently signed by the State Historic Preservation Officer and the Chief, Division of Environmental Analysis, for Caltrans. Concurring parties to the MOA include Caltrans District 01, the Sherwood Valley Rancheria of Pomo Indians, and Noyo River Indian Community.

10 August 2011
Date of Approval


JOHN D. WEBB, Office Chief
North Region Environmental Services

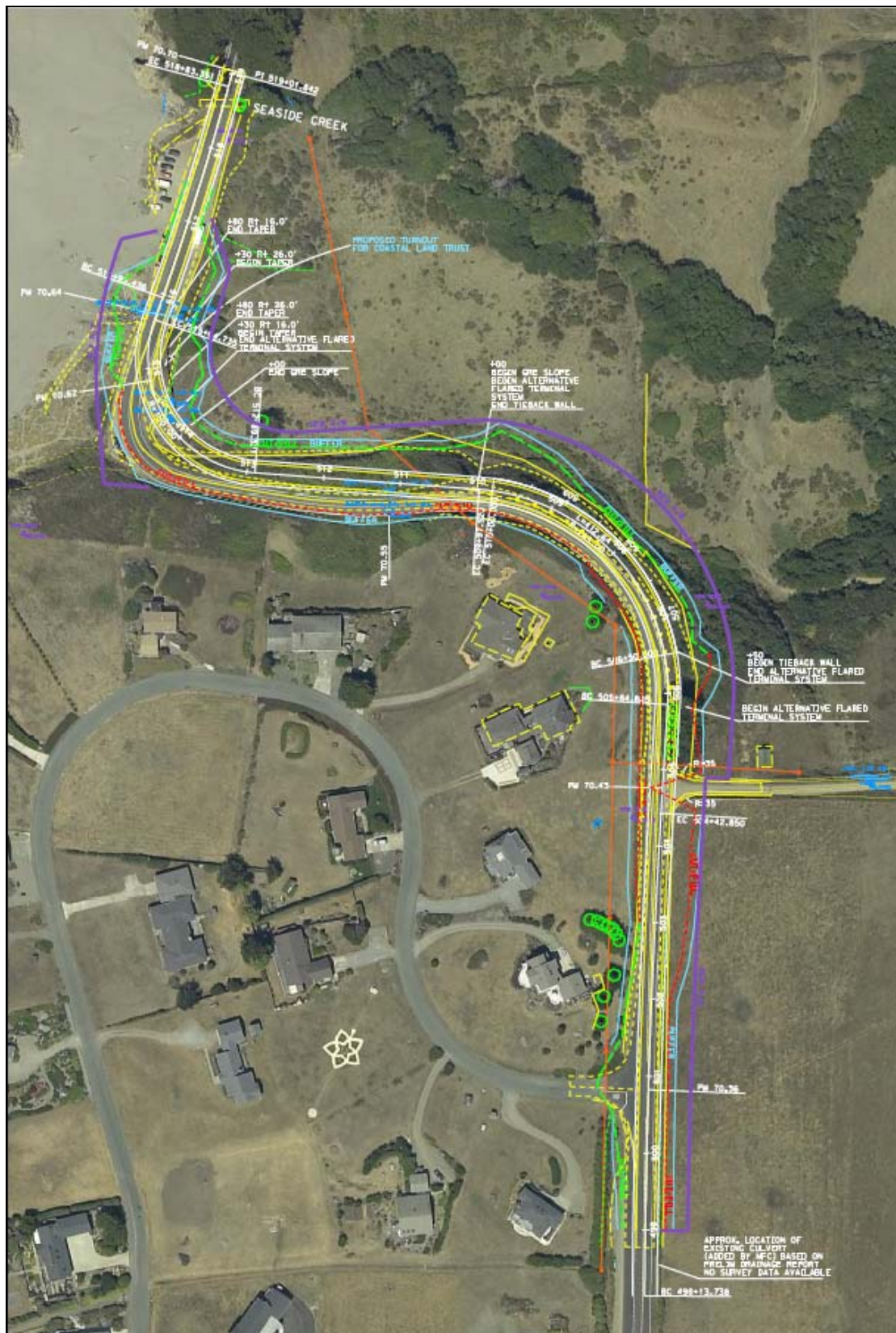
Chapter 1 – Proposed Project

Introduction

The California Department of Transportation (Caltrans) proposes to make storm damage repairs to State Route (SR) 1 in Mendocino County. The project is located in Mendocino County on Highway 1 near Westport between post mile (PM) 70.2 and 70.8. Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

Project Location





Due to heavy winter rain and a failing retaining wall, the roadway prism has failed. The scope of work consists of realigning the roadway, constructing a 700 ft. long Soldier Pile Tieback (SPTB) wall with a modified ST10 barrier with a bicycle rail, replacing the metal beam guardrail (MBGR), replacing the culvert at PM 70.65, relocating overhead utilities and rebuilding the structural section. An existing private driveway near PM 70.65 would be replaced with a pull-out. Temporary Best Management Practices (BMP's) would be implemented to control sediment and pollutants.

This project is programmed for fiscal year (FY) 2012/2013 as a "Major Damage" Project (Permanent Restoration 20.10.201.131) funded from the State Highway Operation and Protection Program (SHOPP) Major Program. The project is currently programmed for \$3.4 million in Construction Capital and \$548,000 in Right of Way Capital.

Purpose and Need

The purpose of this project is to improve the operation and safety of the highway and to stabilize soil erosion by repairing the storm damage. The project is needed to maintain the mobility and performance of Highway 1 that was damaged due to winter rains and a failed retaining wall.

Project Description

The scope of work consists of realigning the roadway, constructing a 700 ft. long Soldier Pile Tieback (SPTB) wall with a modified ST10 barrier with a bicycle rail, replacing the metal beam guardrail (MBGR), replacing the culvert at PM 70.65, relocating overhead utilities and rebuilding the structural section. An existing private driveway near PM 70.65 would be replaced with a pull-out. Temporary Best Management Practices (BMP's) would be implemented to control sediment and pollutants. In addition, Low Impact Development Techniques will be incorporated into the design of a vegetated bioswale adjacent to the southbound lane of the highway. A portion of the highway roadbed will be removed and replaced with a 400 foot vegetated bioswale. The bioswale will collect storm water runoff, promote infiltration, trap sediment and provide for pollutant removal.

Equipment used during construction of the retaining wall may include excavators, loaders, and drilling equipment. Depending on the wall system chosen, pile driving equipment may also be required.

The closed northbound traffic lane would be used for staging of equipment and materials during the wall construction. Adjacent private property south of the project on the east side of SR 1 (currently in agricultural use) would be a potential location for storing equipment and materials and moving materials to the worksite without causing additional traffic impacts.

To minimize impacts, access to the wall construction area may be limited to the closed northbound lane. However, access from the adjacent private property to the southeast and from the gate across from the beach could help to minimize construction costs.

A temporary one-way traffic control signal would be installed during construction. There would be one lane traffic control, lane reduction, and a bicycle detour. A temporary barrier (Type K-rail) would be placed to separate the work area from the traffic lane. Flagging and pilot car would be used when drill rig or other equipment encroaches into the traveled lanes.

The schedule for the proposed project assumes that a soldier pile wall with two levels of tieback anchors would be the controlling operation. A third level of tiebacks would add approximately 5 to 6 weeks to the schedule. The GRE slope would be built concurrently. The total project duration is anticipated to be two construction seasons, beginning in the Spring of 2013 and ending in the Fall of 2014.

Permits and Approvals Needed

The following environmental permits are required for this project:

- Section 404 Permit from the U.S. Army Corp. of Engineers (USACE), San Francisco District
- Section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board (RWQCB),
- Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game (CDFG), and
- Coastal Development Permit (CDP) from either the California Coastal Commission (CCC) or Mendocino County

Chapter 2 - Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document:

Wild and Scenic Rivers

Parks and Recreational Facilities

Growth Inducement

Farmlands

Utilities and Emergency Services

Traffic and Transportation/Pedestrian and Bicycle Facilities

Water Quality and Stormwater Runoff

Paleontology

Air Quality/Noise

Land Use

Biological Resources

Regulatory Setting

Clean Water Act (33 U. S. C. 1251-1376)

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a Federal license or permit that allows activities resulting in a discharge to waters of the U. S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Boards administer the certification program in California.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into waters of the U. S.

Section 404 establishes a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the U. S. (including wetlands). Implementing regulations by USACE are found in the Code of Federal Regulations (CFR) at 33 CFR Parts 320-330. Guidelines for implementation are referred to as the Section 404 (b)(1) Guidelines and were developed by the Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR Parts 230). The Guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Executive Order 13186 Migratory Bird Treaty Act

Executive Order 13186 is designed to assist federal agencies in their efforts to comply with the Federal Migratory Bird Treaty Act. Under the Federal Migratory Bird Treaty Act, take is defined as the action of or attempt to pursue, hunt, shoot, capture, collect, or kill (50 CFR 10.12) and includes “intentional” take (for example, take that is the purpose of the activity in question) and “unintentional” take (for example, take that results from, but is not the purpose of, the activity in question).

Executive Order 13112 Prevention and Control of Invasive Species

In response to Executive Order 13112, the Federal Highway Administration (FHWA) requires an analysis of the risk for any federal funded action to cause or promote the introduction or spread of invasive species. Disturbed soils are the perfect medium for the establishment of noxious weeds. The clearing, grading, and soil moving operations associated with roadway construction provide an opportunity for noxious weeds to become established.

California Fish and Game Code Section 1602

California Fish and Game Code Section 1602 requires any person, state or local governmental agency, or public utility to notify CDFG before beginning any activity that would do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. California Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in California.

California Fish and Game Code Sections 3503 and 3503.5

Under California Fish and Game Code Sections 3503 and 3503.5, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, or to take, possess, or destroy any birds of prey or their nest or eggs.

California Native Plant Protection Act (California Fish and Game Code Sections 1900 to 1913)

The California Native Plant Protection Act (NPPA) requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of listed plants from the wild. NPPA also requires notification of CDFG at least 10 days in advance of any change in land use. This notification allows CDFG to salvage listed plant species that would otherwise be destroyed.

Fish Passage – Senate Bill 857

Senate Bill (SB) 857, enacted into law on January 1, 2006, requires Caltrans to complete an assessment of potential barriers to anadromous fish prior to commencing any project using state or federal transportation money. SB 857 details the requirements of assessment and remediation of barriers to fish passage at stream crossings along the California highway system. All projects on streams that currently or historically supported anadromous fish shall include a fish passage assessment according to National Marine Fisheries Service (NMFS) and CDFG guidelines.

According to CalFish range maps, the proposed Seaside Creek Storm Damage Repair Project is within the range of the Northern California steelhead Environmentally Sensitive Unit (ESU), Central California coho ESU, and California Coastal Chinook salmon ESU. The two culverts within the BSA, PM 70.55 and 70.65, convey water that drains from hillsides. These culverts do not convey drainages that currently or historically could support anadromous fish.

In 2005, a fish passage assessment was conducted on many of the culverts within Caltrans District 1 (coastal portions of Mendocino, Humboldt, and Del Norte counties) by Humboldt State University. The Seaside Creek box culvert (PM 70.70), located to the north of the project's BSA, was included in this study. The study concluded that this culvert is a partial barrier, easily plugged with debris.

Waters Of The State

According to Section 13050 of the California Water Code, waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.

Affected Environment

The proposed Seaside Creek Storm Damage Repair Project is located in coastal Mendocino County, between the towns of Cleone and Westport. MacKerricher State Park is located to the south of the project. Most of the parcels within and adjacent to the Biological Study Area (BSA) are privately owned. The Coastal Land Trust owns two of the parcels adjacent to the project. The BSA is approximately 9.59 acres in size.

Topography within the BSA varies from a relatively flat meadow to steeply sloping coastal bluffs. The BSA is located along a coastal strip of SR 1. At its westerly extent the paved roadway is less than 600 feet from the mean high tide mark of the

Pacific Ocean. Elevation within the BSA ranges from 0 feet (sea level) at the beach edge to 165 feet above sea level at its highest point.

Regional Species and Habitats of Concern

A literature review was conducted to determine if any new species listings had occurred since the original NES was completed. A list of sensitive species was developed from reviewing the following information: U. S. Fish and Wildlife Service (USFWS) online species list database, the California Department of Fish and Game (CDFG) Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants for the Westport, Inglenook, Fort Bragg, Lincoln Ridge, Dutchmans Knoll, and Noyo Hill 7.5-minute USGS quadrangles. There have been no additions or updates to the listing status of any species since the last species list updates were obtained.

The CNDDB and CNPS inventory were also queried for sensitive plants in Mendocino County. The Western Bat Working Group (WBWG) Regional Priority Matrix (2007) was also reviewed for information regarding sensitive bat species.

Soils

The Natural Resources Conservation Service (NRCS) soil survey for *Mendocino County, Western Part, California* was reviewed to determine the soil types present within the BSA, listed in Table 1 below. Five different soils were identified within the BSA including two soil complexes, two soils, and one “miscellaneous area” which had little soil material and vegetation. Three of the soil types, Cabrillo-Heeser complex, Tropaquepts, and coastal beaches, are listed on the NRCS national hydric soils list (NRCS 2010); these types of soils can be an indicator of wetland habitat.

Table 1: Soils Present within the BSA

Soil Unit Name	Soil Unit Number
Abalobadiah-Bruhel-Vizcaino complex	101
Cabrillo-Heeser complex	117
Coastal beaches	126
Dystropepts	139
Tropaquepts	214

Abalobadiah-Bruhel-Vizcaino Complex

The Abalobadiah-Bruhel-Vizcaino complex is a combination primarily of the Abalobadiah, Bruhel, and Vizcaino soil series, which are all a loamy texture. These

soils derived from material weathered from sandstone and occur on coastal mountains and hills with 30 to 50 percent slopes. The Abalobadiah series consists of moderately deep and well-drained soils, the Bruhel series consists of deep to very deep well drained soils, and the Vizcaino series consists of shallow well-drained soils.

Cabrillo Heeser Complex

The Cabrillo-Heeser complex is composed primarily of the Cabrillo and Heeser soil series and occurs on marine terraces with zero to five percent slopes. The Cabrillo component is a sandy loam derived from a sandstone parent material consisting of fluvio-marine deposits. Available water capacity to a restrictive layer of 60 inches is moderate and the soil is not flooded or ponded. Organic matter in the surface horizon is approximately six percent. The Heeser series consists of very deep sandy loam soils formed in eolian sands. Soils in the Heeser series are somewhat excessively drained and water movement in the most restrictive layer is still relatively high. The Cabrillo-Heeser complex is listed on the NRCS national hydric soils list.

Coastal Beaches

Coastal beaches are composed primarily of beach sands and have little to no loam or silt component. They have little vegetation and are not only well drained but also highly influenced by tidal fluctuations. The coastal beaches soil type is listed on the NRCS national hydric soils list.

Dystropepts

Dystropepts consist of soils on side slopes of marine terraces. They form from material derived from sandstone or shale. The texture of this soil is variable, transitioning from loam in the upper horizon to gravelly clay loam in the lower horizon. They are shallow or moderately deep to bedrock and are well drained. Permeability and available water capacity are extremely variable in the Dystropepts. The effective rooting depth in Dystropepts is limited by bedrock at a depth of 10 to 40 inches.

Tropaquepts

Tropaquepts are very deep, very poorly drained soils formed in marine sediments. They are located on marine terraces at the heads of drainageways, along drainageways, or in shallow depressions. Texture varies greatly throughout the horizons as do permeability and available water capacity. The saturated zone starts between the surface and at a depth of 10 inches and can extend to a depth of more than 60 inches. Tropaquepts are listed on the NRCS national hydric soils list.

This section describes the sensitive natural communities, special-status wildlife species, and special-status plant species that are likely to occur in the BSA. It also describes potential impacts to resources, proposed avoidance and minimization measures, proposed mitigation measures for unavoidable impacts, and anticipated cumulative impacts.

The proposed Seaside Creek Storm Damage Repair Project could potentially impact biological resources through:

- Permanent loss of habitat within the BSA.
- Potential incidental take of special-status animal species with potential to occur within the impact area
- Erosion and sedimentation as a result of construction activities
- Noise and visual disturbance of special-status animal species due to construction activities
- Alteration of drainage patterns due to relocation/reconstruction of drainage areas

Biological Study Area (BSA) Drainages/Hydrology

The project is located within the Mendocino Coast Hydrologic Unit (HU), Rockport Hydrologic Area (HA), Ten Mile River Hydrologic Sub-area (HSA). Unnamed perennial and intermittent drainages, roadside drainage ditches, and seasonal and perennial wetlands are located within the BSA. Seaside Creek is located just outside of the northern limits of the BSA. Ten Mile River is located approximately 1 mile to the south of the BSA.

The BSA is hydrologically complex due to variations in elevation and landform. The southern portion of the BSA starts on a coastal bluff plateau and then descends, with a steep gradient, north into the Seaside Creek floodplain. The BSA can be subdivided into two hydrological areas: areas located to the north and east of SR 1, and areas located to the south and west of SR 1. Areas located north and east of SR 1 drain into the Pacific Ocean through Seaside Creek and its perennial tributary. Areas located to the south and west of SR 1 drain into the Pacific Ocean via a roadside ditch that runs parallel to SR 1.

Located outside of the BSA, Seaside Creek runs east to west 70 to 360 feet from the northern BSA boundary. The BSA is hydrologically linked to Seaside Creek year round through a small perennial drainage. The hillsides in the southeast portion of the BSA drain into this perennial drainage via roadside ditches. The sloped areas

between the plateau and the floodplain contain several perennial seeps, which flow into the perennial drainage and then into Seaside Creek.

The Seaside Creek floodplain is topographically the lowest point within the BSA and has a subtle slope that drains into Seaside Creek. As a result, water flowing off of the hills immediately east of SR 1 enters the meadow and drains into Seaside Creek or through the culvert at PM 70.65. The meadow is flooded during most of the winter months.

The portion of the BSA located southwest of SR 1 contains an eroding hillside separating several single unit homes from the highway. Water in this area drains into a roadside ditch that runs east to west along the south side of the highway. The roadside ditch drains water through two culverts depending upon the point of entry: one culvert releases water into the floodplain meadow north of SR 1, and the second culvert drains into Seaside Beach. There is a natural seep on this hillside where the slope breaks and coastal scrub vegetation gives way to freshwater seep vegetation.

Wildlife

The BSA provides suitable habitat for a number of common wildlife species due to its proximity to both fresh and salt water and the relatively low level of disturbance in the area. Wildlife species that may be present in the project area include wild turkeys, osprey, mountain lions, hawks, owls, California quail, western blue birds, bobcat, red fox, Oregon garter snakes, mule deer, Western sagebrush lizards, Northwestern fence lizards, Skilton's skinks, rubber boas and other snakes, Pacific tree frogs, western toads, salamanders, and striped skunks.

Wildlife species observed in the BSA during surveys included song sparrow, California gull, house finch, gold finch, brewer's blackbird, red-winged blackbird, turkey vulture, great blue heron, Rufus hummingbird, barn swallow, black phoebe, raven, scrub jay, Northern flicker, and white-crowned sparrow. California buckeye butterfly and mule deer were also observed. Signs of pocket gopher and coyote were also observed.

A juvenile Northern elephant seal, being monitored by the Sausalito Marine Mammal Center, was observed on Seaside Beach during the March 17, 2010 field visit. A sea lion skeleton was also observed at the outlet of Seaside Creek during the March 17, 2010 field visit.

Vegetation Communities

Vegetation communities within the BSA were classified primarily based on plant community descriptions provided in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). The last category, ruderal herbaceous, is not a *Manual of California Vegetation* series and is used in this NES to describe vegetated areas composed primarily of non-native species that are cultivated, ornamental, or exotic. Table 2 summarizes the plant communities found within the BSA.

Table 2: Plant Communities and Coverage within BSA

Plant Community	Area (acres)	Percent of BSA
Coyote brush series	0.883	9.2
Sitka willow series	1.351	14
California annual grassland series	3.017	31.5
Sedge series	0.747	7.8
European beachgrass series	0.333	3.5
Ruderal herbaceous	1.147	12.0
Unvegetated/uncharacterized areas within BSA (includes paved roadways and dirt pull-outs)	2.112	22.0
Total	9.59	

Coyote brush series

Coyote brush (*Baccharis pilularis*) is the sole or dominant shrub in the coyote brush series. Black sage (*Salvia mellifera*), California blackberry (*Rubus ursinus*), California buckwheat (*Eriogonum fasciculatum*), California coffeeberry (*Rhamnus californica*), California sagebrush (*Artemisia californica*), wax-myrtle (*Myrica californica*), poison oak (*Toxicodendron diversilobum*), salal (*Gaultheria shallon*), white sage (*Salvia apiana*), and/or yellow bush lupine (*Lupinus arboreus*) may also be present in the coyote brush series. This habitat type occurs in the northeastern corner of the BSA on either side of the private access road as it turns west and descends towards the meadow.

Sitka willow series

Sitka willow (*Salix sitchensis*) is the sole or dominant shrub or tree in the canopy of the Sitka willow series. Bigleaf maple (*Acer macrophyllum*), black cottonwood (*Populus balsamifera*), California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), Mexican elderberry (*Sambucus mexicana*), red osier (*Cornus sericea*), white alder (*Alnus rhombifolia*), and/or willows may also be present in the Sitka willow series. This vegetation type occurs along the perennial tributary to Seaside Creek and extends outward along the wet, north facing slopes

surrounding the tributary, including the lower portion of the private access road and the hillslope east of the eastern bend in SR 1.

California annual grassland series

Annual grasses and herbs are dominant in the ground layer of the California annual grassland series. Bromes (*Bromus* sp.), California poppy (*Eschscholzia californica*), filarees (*Erodium* sp.), goldfields (*Lasthenia* sp.), lupines (*Lupinus* sp.), mustards (*Brassica* sp.), oats (*Avena* sp.), owl's-clovers (*Castilleja* sp.), ryegrasses (*Lolium* sp.), and/or star-thistles (*Centaurea* sp.) may be present.

Grassland habitats, dominated by perennial non-native grassland species including velvet grass (*Holcus lanatus*), sweet vernal grass (*Anthoxanthum odoratum*), English rye grass (*Lolium perenne*), and Italian rye grass (*Lolium multiflorum*) occur along the northern border of the BSA from SR 1 to the perennial tributary to Seaside Creek.

Sedge series

Sedges (*Carex* sp.) are the sole, dominant, or important herbs in the ground canopy of the sedge series. Bulrushes (*Scirpus* sp.), rushes (*Juncus* sp.), sedges, and/or spikerushes (*Eleocharis* sp.) may be present in the sedge series.

Freshwater seep habitat dominated by clumps of common bog rush (*Juncus effusus*) and spreading rush (*Juncus patens*) within a matrix of bird's foot trefoil (*Lotus corniculatus*) and white-tipped clover (*Trifolium variegatum*) occur along the margin of the riparian scrub habitat, downslope of the eastern bend of SR 1. Freshwater seep habitat in the BSA is also present upslope and south of SR 1, adjacent to residential parcels on the coastal bluff. This area contains a mix of rushes, clover, and trefoil as well as patches of coast sedge (*Carex obnupta*) and Pacific reed grass (*Calamagrostis nutkaensis*).

European beach grass series

European beach grass is the sole or dominant plant species in the ground canopy of the European beach grass series. Beach bursage (*Ambrosia chamissonis*), beach morning glory (*Calystegia soldanella*), beach pea (*Lathyrus littoralis*), coyote brush (*Baccharis pilularis*), native dunegrass (*Leymus mollis*), yellow bush lupine (*Lupinus arboreus*), and/or yellow sand verbena (*Abronia latifolia*) may be present in the European beach grass series. European beach grass series is a major vegetation community within the vicinity of the project site but only cover a small area within the limits of the BSA, along the western margin of SR 1.

Ruderal Herbaceous

There are two different assemblages of the ruderal herbaceous vegetation type in the BSA. The first is composed of ornamental species such as cultivated roses, oleander bushes, planted cypress trees, and exotic ground covers such as greater periwinkle (*Vinca major*) and Himalayan blackberry (*Rubus armeniacus*). This vegetation mix occurs in a strip along the west side of SR 1, adjacent to the residential parcels in the BSA, and along the private access dirt road in the eastern portion of the BSA. The second ruderal herbaceous type is situated directly north and below SR 1 before the highway turns north and runs parallel to Seaside beach. This area was composed almost entirely of giant knotweed (*Polygonum sachalinense*), an aggressive non-native large-leaved shrub that reached four feet in height, at the time of the initial site surveys. Since that time the Coastal Land Trust has initiated a major removal effort and the entire patch of knotweed has been removed and the area has been covered in black plastic tarp to prevent resprouting.

Invasive Plant Species

Invasive/noxious plant species listed on the California Department of Food and Agriculture (CDFA) and the California Invasive Plant Council (Cal-IPC) noxious weed lists were observed within the BSA during plant surveys, and are described in Table 3. No species from Federal Noxious Weed Regulation 7 CFR 360 were observed within the BSA.

Table 3: Invasive/Noxious Plant Species Found within the BSA

Scientific Name	Common Name	Rating	
		CDFA ¹	Cal-IPC ²
<i>Brassica rapa</i>	Common field mustard	-	Limited
<i>Briza maxima</i>	Rattlesnake grass	-	Limited
<i>Bromus diandrus</i>	Ripgut brome	-	Moderate
<i>Bromus hordeaceus</i>	Soft chess	-	Limited
<i>Carduus pycnocephalus</i>	Italian thistle	C	Moderate
<i>Cirsium vulgare</i>	Bull thistle	C	Moderate
<i>Conium maculatum</i>	Poison hemlock	-	Moderate
<i>Cotoneaster pannosa</i>	Silverleaf cotoneaster	-	Moderate
<i>Dactylis glomerata</i>	Orchardgrass	-	Limited
<i>Delairea odorata</i>	Cape ivy	-	High
<i>Erechtites glomerata</i>	Cutleaf burnweed	-	Moderate
<i>Festuca arundinacea</i>	Tall fescue	-	Moderate
<i>Geranium dissectum</i>	Cut-leaf geranium	-	Limited
<i>Holcus lanatum</i>	Velvet grass	-	Moderate
<i>Lolium multiflorum</i>	Italian rye grass	-	Moderate
<i>Medicago polymorpha</i>	Bur clover	-	Limited
<i>Phalaris aquatica</i>	Harding grass	-	Moderate
<i>Plantago lanceolata</i>	English plantain	-	Limited

Scientific Name	Common Name	Rating	
		CDFA ¹	Cal-IPC ²
<i>Polygonum cuspidatum</i>	Japanese knotweed	B	Moderate
<i>Rumex acetosella</i>	Sheep sorrel	-	Moderate
<i>Vinca major</i>	Greater periwinkle	-	Moderate

¹CDFA:

List B: includes weed species that are more widespread, and therefore more difficult to contain; CDFA allows county Agricultural Commissioners to decide if local eradication or containment is warranted.

List C: includes weed species that are so widespread that CDFA does not endorse state or county-funded eradication containment efforts except in nurseries or seed lots.

- = no rating

²Cal-IPC:

High: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Special Status Plant Species

Maple-leaved Checkerbloom

The maple-leaved checkerbloom (*Sidalcea malachroides*) is listed by the CNPS as a list 4.2 species. List 4 species are plants of limited distribution or infrequent occurrence throughout California, and their vulnerability or susceptibility to threat appears relatively low at this time. Plants on List 4 cannot be called "rare" from a statewide perspective, yet they are uncommon enough that their status is monitored regularly when possible. The ".2" corresponds to a threat rank determined by CNPS denoting that the species is fairly threatened in California.

The maple-leaved checkerbloom is a small, woody perennial shrub in the Malvaceae (mallow) family. It is found in a variety of coastal habitats, from Central California through Oregon, including coastal prairie, North Coast coniferous forest, and mixed evergreen forest. Its leaves are thin and grapelike, and can be easily confused with members of the genus *Rubus* such as thimbleberry (*Rubus parviflorus*), California blackberry (*R. ursinus*), and Himalayan blackberry (*R. armeniacus*). The maple-leaved checkerbloom has a dense, spike-like inflorescence with small 5-petaled white

flowers. Identification of maple-leaved checkerbloom is limited to its blooming period, which is generally April through August.

Survey Results

Three populations of the maple-leaved checkerbloom were identified during focused surveys of the BSA. The first population is located on the west side of SR 1 at the toe of the slope just before it meets the beach. This population is composed of over twenty individual plants and extends beyond the boundaries of the BSA. The other two populations are composed of a single plant each and are located north of SR1 where meadow habitat meets the steep, roadside slope. One population is growing at the edge of the slope and has become intertwined with *Rubus* sp. brambles and other hillslope vegetation. The remaining plant is growing in a patch of blackberry shrubs in the meadow, approximately 5 to 10 feet from the slope.

Critical Habitat

Critical habitat for the maple-leaved checkerbloom has not been designated.

Environmental Consequences

With avoidance measures in place, the proposed project would not affect the maple-leaved checkerbloom.

Special Status Amphibians

Two amphibian species listed as state species of special concern have the potential to be present within the BSA: the northern red-legged frog (*Rana aurora*) and the foothill yellow-legged frog (*Rana boylei*).

Northern red-legged frog

The northern red-legged frog is found from southern Oregon to Mendocino County, California and can be found in California from near sea level to 980 feet in elevation. Northern red-legged frog breeding habitat typically consists of permanent or temporary water bordered by dense grassy or shrubby vegetation (Jennings and Hayes 1994). Northern red-legged frog oviposition is restricted to a limited time window (January through March); however, males can be observed at aquatic breeding sites as much as one month before females appear. After oviposition, adult northern red-legged frogs leave the breeding site and disperse into moist areas of dense, thick vegetation where they have been observed through late spring and summer (Jennings and Hayes 1994). While this species depends on ponds or streams during the

breeding season, dispersal habitat includes wet areas in humid forests, woodlands, and grassland meadows often far from permanent water.

Foothill yellow-legged frog

Historically, the foothill yellow-legged frog was distributed in California throughout the foothill portions of most drainages from the Oregon border to the San Gabriel River system.

The foothill yellow-legged frog is closely restricted to water, preferring to inhabit small to moderate-sized streams with shallow flowing water. Cobble-sized substrate is used for oviposition sites and for refuge for tadpoles and metamorphs. The foothill yellow-legged frog is usually found near riffles where there are rocks and sunny banks. Some adults may seek out springs on hillsides, and remain there until water becomes more abundant.

Foothill yellow-legged frogs time oviposition to occur following the period of high flow discharge that result from winter rainfall and snowmelt, typically between late March and early June. Masses of 300 to 1,200 eggs are deposited on the downstream side of cobble and boulders over which a relatively thin gentle flow of water exists. A minimum of 15 weeks is required to attain metamorphosis, which typically occurs between July and September, before streams dry up in the summer. Upon metamorphosis, juvenile foothill yellow-legged frogs show a marked movement in an upstream direction. It is thought to take two years for this species of frog to reach adult size.

Survey Results

Northern red-legged frogs or foothill yellow-legged frogs were not observed within the BSA during focused wildlife surveys site visits conducted for the proposed project. Potential suitable habitat for the northern red-legged frog and the foothill yellow-legged frog is present within the vicinity of the BSA, associated with Seaside Creek. There are no documented occurrences of the northern red-legged frog within the BSA. The closest documented occurrence of the northern red-legged frog is located at MacKerricher State Park, south of the BSA. There are no documented occurrences of the foothill yellow-legged frog within the BSA. The closest documented occurrences of the foothill yellow-legged frog are located near Branscomb, approximately 10 miles to the northeast of the BSA.

Environmental Consequences

The implementation of avoidance measures would protect the northern red-legged frog and the foothill yellow-legged frog, should they occur within the BSA, during construction of the proposed project.

Special Status Invertebrates

Two invertebrate species listed as state species of special concern have the potential to be present within the BSA: globose dune beetle (*Coelus globosus*) and Ten Mile shoulderband (*Noyo interassa*).

The globose dune beetle is a flightless, sessile beetle that lives in fore dunes, sand hummocks, and sometimes back dunes along the immediate coast line. Larvae and pupae spend most of their time in the sand; however, the larvae can also be found under vegetation or accumulated debris. Adults spend the hotter summer months aggregated under vegetation or debris and then come the surface at night and on cool, foggy days. The Ten Mile shoulderband is a terrestrial dune dwelling gastropod in the family Helminthoglyptidae. Terrestrial snails do not disperse very far and only do so to find and move towards a food item.

Survey Results

The globose dune beetle and the Ten Mile shoulderband were not observed within the BSA or on the adjacent beach. The closest known occurrence of the globose dune beetle is located at Ten Mile Beach, observed in 1982. The closest known occurrence of the Ten Mile shoulderband is located at the south end of Ten Mile Beach, observed in 1973. Although the dune habitat within the BSA is highly disturbed by vehicle, domestic pet, and pedestrian traffic, dune habitat adjacent to the BSA is less disturbed and contains vegetation and debris piles that are potential suitable habitat for these species.

Environmental Consequences

The implementation of avoidance measures would protect the globose dune beetle and the Ten Mile shoulderband and their habitat during construction of the proposed project.

Threatened & Endangered Species

Since there were no federally listed species, Section 7 Consultation was not required for this project.

Tidewater Goby

The tidewater goby (*Eucyclogobius newberryi*) is listed as a federal endangered species and a state species of special concern. Historically, the tidewater goby occurred in at least 110 California coastal lagoons, from Tillas Slough near the Oregon border to Agua Hedionda Lagoon in northern San Diego County (USFWS 2010b). Currently, the tidewater goby is known to occur in about 85 locations, although the number of sites fluctuates with climatic conditions. The most stable tidewater goby populations are found in lagoons and estuaries of intermediate size (5 to 124 acres) that have remained relatively unaffected by human activities (USFWS 2010b).

Tidewater gobies are relatively small, rarely exceeding 2 inches in length. They are generally found in shallow lagoons and lower stream reaches where the water is slow-moving or fairly still, but not stagnant, and with fairly high dissolved oxygen levels. The tidewater goby prefers salinity levels less than 10 parts-per-thousand (ppt) and is usually found at the upstream portions of larger coastal lagoons (Moyle 2002). Tidewater gobies can survive in salinities of 0 to 41 ppt and will breed at salinities of 2-27 ppt. While the species can live in a variety of temperatures, tidewater gobies require well-oxygenated water. Reported water depth for tidewater goby habitat ranges from 10 to 39 inches. Suitable water conditions for spawning include water that is 64 to 72 °F, with a sand and/or mud substrate and abundant emergent and submerged vegetation.

Tidewater gobies are predominantly an annual species, with individuals occasionally living longer than a year (Moyle 2002). Tidewater goby reproduction takes place year round, peaking from late April or May to July and dropping off between December and March. Females produce between 150 and 1,100 eggs during each spawning, and can spawn every 1 to 3 months for several months.

Survey Results

The closest known occurrence of the tidewater goby is located within the MEN-1 critical habitat unit, in tidal lagoon habitat upstream of the Ten Mile River bridge on SR 1. This area is located approximately 1 mile south of the BSA. No estuarine or tidal lagoon habitat is present within the BSA or connected to waters in the vicinity of

the BSA. Seaside Creek is not large enough to sustain a tidal lagoon where it meets the Pacific Ocean.

Critical Habitat

Revised critical habitat for the tidewater goby was designated by the USFWS on January 31, 2008. The project is not located within critical habitat designated for the tidewater goby. Critical habitat for the tidewater goby is found at Ten Mile River (MEN-1 unit), located approximately 1 mile south of the project.

Environmental Consequences

The implementation of avoidance measures would protect the tidewater goby and its habitat during construction of the proposed project

California Coastal Chinook salmon ESU

The California coastal Chinook salmon Evolutionarily Significant Unit (ESU) (*Oncorhynchus tshawytscha*) was listed as a federal threatened species on September 16, 1999 and reaffirmed on June 28, 2005. The California coastal Chinook salmon ESU includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive). Seven artificial propagation programs are considered part of the ESU: the Humboldt Fish Action Council (Freshwater Creek), Yager Creek, Redwood Creek, Hollow Tree, Van Arsdale Fish Station, Mattole Salmon Group, and Mad River Hatchery fall-run Chinook hatchery programs.

The California coastal Chinook salmon range extends south from Redwood Creek in Humboldt County to the Russian River in Sonoma County. California coastal Chinook salmon exhibits an ocean-type life history. Low flows, high temperatures, and barrier bars that develop in smaller coastal rivers during the summer months block movement by anadromous fish, resulting in an ocean-dominant life-cycle. Most California coastal Chinook salmon migrate to the ocean as sub-yearlings. Adults return predominantly as 3 and 4 year old fish, with a small proportion as 5 year old fish. Fall-run upstream migration occurs from June through December with a peak in September and October. Spawning occurs from late-September through December with a peak in late-October.

Survey Results

Although potential habitat for the California coastal Chinook salmon is present in Seaside Creek, the perennial drainages within the BSA are very narrow and steep and

therefore do not provide suitable habitat for the California coast Chinook salmon. As a result it is unlikely that California coastal Chinook salmon are present within the BSA.

Critical Habitat

Critical habitat for the California coastal Chinook salmon ESU was published on September 2, 2005, with an effective date of January 2, 2006. Seaside Creek and its tributaries are not included as critical habitat for the California coast Chinook salmon ESU.

Environmental Consequences

The implementation of avoidance measures would protect the California coast Chinook salmon and its habitat during construction of the proposed project.

Central California Coast Coho Salmon

The Central California Coast coho salmon (*Oncorhynchus kisutch*) was relisted from a federal threatened species to an endangered species on June 28, 2005. The Central California Coast coho salmon ESU includes all naturally spawned populations of coho salmon from Punta Gorda in northern California south to and including the San Lorenzo River in central California, as well as populations in tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River system, as well as four artificial propagation programs: the Don Clausen Fish Hatchery Captive Broodstock Program, Scott Creek/Kind Fisher Flats Conservation Program, Scott Creek Captive Broodstock Program, and the Noyo River Fish Station Egg-Take Program Coho Hatchery Programs.

Coho salmon spend approximately the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Coho salmon spawn in small streams with stable gravel substrates. Coho salmon spend the remainder of their life cycle foraging in estuarine and marine waters of the Pacific Ocean.

Survey Results

Although potential habitat for the Central California Coast coho salmon is present in Seaside Creek, the perennial drainages within the BSA are very narrow and steep and therefore do not provide suitable habitat for the Central California Coast coho salmon. As a result it is unlikely that Central California Coast coho salmon are present within the BSA.

Critical Habitat

Critical habitat for the Central California Coast coho salmon was designated on May 5, 1999. Critical habitat for the Central California Coast coho salmon includes accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda in Humboldt County and the San Lorenzo River in Santa Cruz County (inclusive). Seaside Creek (Mendocino Coast Hydrologic Unit) is not designated as critical habitat for the Central California Coast coho salmon.

Environmental Consequences

The implementation of avoidance measures would protect the Central California Coast coho salmon and its habitat during construction of the proposed project.

Northern California Steelhead

The Northern California steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss*) was listed as a federal threatened species on June 7, 2000 and reaffirmed on January 5, 2006. The Northern California steelhead DPS includes all naturally spawned populations below natural and manmade impassable barriers in California coastal river basins from Redwood Creek southward to, but not including, the Russian River, as well as two artificial propagation programs: the Yager Creek Hatchery and North Fork Gualala River Hatchery (Gualala River Steelhead Project) steelhead hatchery programs.

Steelhead currently range from the Kamchatka Peninsula to east and south along the Pacific Coast of North America to Southern California. Steelhead are either anadromous or lifelong freshwater residents. Freshwater resident forms are called rainbow or redband trout, while the anadromous forms are called steelhead. After spending the first two years of life in freshwater, steelhead migrate to the ocean. They spend two to three years in the ocean then return to freshwater streams and rivers to spawn. Steelhead spawning usually occurs between December and June.

Survey Results

Although habitat for the Northern California steelhead is present in Seaside Creek, the perennial drainages within the BSA are very narrow and steep and therefore do not provide suitable habitat for the Northern California steelhead. As a result it is unlikely that Northern California steelhead are present within the BSA.

Critical Habitat

Critical habitat for the Northern California steelhead was published on September 2, 2005, with an effective date of January 2, 2006. Seaside Creek is designated as critical habitat for the Northern California steelhead.

Environmental Consequences

The implementation of avoidance measures would protect the Northern California steelhead and its habitat during construction of the proposed project.

Western Snowy Plover

The Pacific coast population of the western snowy plover (*Charadrius alexandrinus nivosus*) is a federal threatened species and a state species of special concern. The Pacific coast population of the species is defined as those individuals that nest adjacent to tidal waters of the Pacific Ocean, and includes all nesting birds on the mainland coast, peninsulas, offshore islands, adjacent bays, estuaries, and coastal rivers. The current known breeding range of the Pacific coast population extends from Damon Point, Washington, to Bahia Magdalena, Baja California, Mexico. Snowy plovers that nest at inland sites are not considered part of the Pacific coast population, although they may migrate to coastal areas during winter months (USFWS 2010a).

The Pacific coast population of the Western snowy plover breeds primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Less common nesting habitat includes bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. Suitable nesting habitat is distributed throughout the listed range, but may be widely separated by areas of rocky shoreline (USFWS 2010a).

The breeding season for Pacific coast plovers in the United States extends from March 1 through September 30, although courtship activities have been observed during February. Clutches, which most commonly consist of three eggs, are laid in shallow scrapes or depressions in the sand.

Survey Results

Although the western snowy plover was not observed during surveys and has not been documented in the Seaside Beach area a small portion of the BSA includes Seaside Beach, which provides marginally suitable nesting habitat for the species. In

recent years, western snowy plover nesting has been documented on the beach immediately south of Seaside Beach, near the mouth of the Ten Mile River (USFWS 2010a). This documented nesting site is within a designated critical habitat unit for the species which extends the length of MacKerricher State Park in Mendocino County (Unit CA-5). Although Seaside Beach appears to be a logical additional nesting location for the western snowy plover, the species has not been documented at this location. Heavy use of Seaside Beach by human, vehicular, and domestic pet traffic is likely a strong deterrent to nesting.

Critical Habitat

Critical habitat for the western snowy plover was designated by USFWS on September 29, 2005. The project is not located within designated critical habitat for the western snowy plover. Designated critical habitat is located at MacKerricher State Park (Unit CA-5), located to the south of the project.

Environmental Consequences

The implementation of avoidance measures would protect the western snowy plover and its habitat during construction of the proposed project.

Northern Spotted Owl

The northern spotted owl (*Strix occidentalis caurina*) is a federal threatened species and a state species of special concern. Northern spotted owls generally have large home ranges and use large tracts of land containing significant acreage of older forest to meet their biological needs. The attributes of superior northern spotted owl nesting and roosting habitat typically include a moderate to high canopy closure (60 to 80 percent); a multi-layered, multi-species canopy with large overstory trees; a high incidence of large trees with deformities (large cavities, broken tops, mistletoe infections, and debris accumulations); large accumulations of fallen trees and other debris; and sufficient open space below the canopy for owls to fly.

Survey Results

Suitable habitat for the northern spotted owl is not present within or adjacent to the BSA. The closest known northern spotted owl territory is located approximately 0.8 air/straight line miles to the northeast of the BSA, associated with Frazer Creek.

The USFWS report, Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California (July 26, 2006), was consulted for assistance in estimating potential effects to the northern

spotted owl due to noise and visual disturbance during the construction of this project. According to that report, noise levels from typical highway traffic on SR 1 within the BSA are estimated to be between 67 to 95 decibels (dB) (Table 4). Equipment expected to be used during the construction of this project would generate noise at the same or a softer level as existing highway traffic, at noise levels ranging from 80 to 89 dB (Table 5). The project is located in an area that is subject to noise from the highway, and frequent highway maintenance activities and other human disturbance associated with nearby residential areas and Seaside Creek beach. Visual disturbance to northern spotted owls is not expected to occur. Noise impacts to northern spotted owls is not expected to occur.

Table 4: Estimated Existing Noise Levels on SR 1 within the BSA

Sound Source	Reported Decibel Value (measured at 50 feet)
Passenger car (50 mph)	67
RVs (small) (low end)	75
Passenger car/light trucks (65 mph) (low end)	76
Automobile	80 (measured at 25 feet)
Large truck (low end)	84
Passenger car/light trucks (65 mph) (high end)	85
RVs (small) (high end)	85
RVs (large) (low end)	85
Pickup truck	87 (measured at 8 feet)
Large truck (high end)	89
RVs (large) (high end)	95

Table 5: Estimated Noise Levels During Construction of the Proposed Project

Sound Source	Reported Decibel Value (measured at 50 feet)
Roller (high end)	80
End or bottom dump truck	84
Backhoe (high end)	84
Concrete mixer (high end)	85
Pump (high end)	85
Dozer (high end)	88
Crane (high end)	88
Paver (high end)	89

The construction of the proposed project is not expected to disturb or interfere with essential lifecycle activities of the northern spotted owl.

Critical Habitat

Revisions to the critical habitat for the northern spotted owl were published by USFWS on August 13, 2008, with an effective date of September 12, 2009. Critical habitat for the northern spotted owl is not located within or adjacent to the limits of this project.

Environmental Consequences

The construction of the proposed project is not expected to disturb or interfere with essential lifecycle activities of the northern spotted owl.

Marbled Murrelet

The marbled murrelet (*Brachyramphus marmoratus*) is a federally threatened species. Critical Habitat for the marbled murrelet was designated by the USFWS on May 24, 1996. The majority of marbled murrelets are found within or adjacent to the marine environment, although there have been detections of marbled murrelets on rivers and inland lakes. Marbled murrelets spend the majority of their lives on the ocean, and come inland to nest. Marbled murrelets typically nest in old-growth forest, and commonly occupy large stands (500 acres) of trees.

Survey Results

Suitable habitat for the marbled murrelet is not present within or adjacent to the BSA.

The USFWS report, *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (July 26, 2006), was consulted for assistance in estimating potential effects to the marbled murrelet due to noise and visual disturbance during the construction of this project. According to that report, noise levels from typical highway traffic on SR 1 within the project limits are estimated to be between 67 to 95 dB (Table 4 above). Equipment expected to be used during the construction of this project would generate noise at the same or a softer level as existing highway traffic, at noise levels ranging from 80 to 89 dB (Table 5 above). The project is located in an area that is subject to noise from the highway, and frequent highway maintenance activities and other human disturbance associated with nearby residential areas and Seaside Creek beach. Visual disturbance to marbled murrelets is not expected to occur. Noise disturbance to marbled murrelets is not expected to occur.

The construction of the proposed project is not expected to disturb or interfere with essential lifecycle activities of the marbled murrelet.

Critical Habitat

Critical habitat for the marbled murrelet was designated by the USFWS on May 24, 1996. Critical habitat for the northern spotted owl is not located within or adjacent to the limits of this project.

Environmental Consequences

The construction of the proposed project is not expected to disturb or interfere with essential lifecycle activities of the marbled murrelet.

Migratory Birds

Federal and state laws protect migratory birds, their occupied nests, and their eggs from destruction. The applicable Federal law is the Migratory Bird Treaty Act (15 USC 703-711), 50 CFR Part 21, and 50 CFR Part 10. Protection under California law is found in the Fish Game Code Sections 3503, 3513, and 3800.

Survey Results

Although no nests were seen during surveys, it is anticipated that migratory birds may try to nest in vegetation or on structures such as culverts within the project area.

Environmental Consequences

The implementation of avoidance measures would protect nesting migratory birds during construction of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

Invasive Species

The Coastal Land Trust is currently conducting a project to eradicate knotweed (either Japanese knotweed (*Polygonum cuspidatum*) or giant knotweed (*P. sachalinense*)) from their property, located adjacent to the proposed project. Caltrans would coordinate with the Coastal Land Trust during construction to avoid the spread of this species.

The proposed revegetation measures for all disturbed soils, including the use of native species, soil amendments, and “weed free” mulch, reduces the risk of introducing

noxious weeds. The contract specifications for permanent erosion control would require the use of California native forb and grass species, from the same elevation and geographic area as the project site. All areas disturbed by construction would be treated with a seed mix comprised of local native grasses and forbs. Soils would be amended with compost containing long-term soil nutrients and slow-release organic fertilizers to provide nutrients over the first year. Mulches used on the project would be from source materials that would not introduce exotic species.

Maple-Leaved Checkerbloom

One of the maple-leaved checkerbloom plants would be impacted by the construction of this project. This plant is located on the Coastal Land Trust's parcel. During the fall prior to the start of construction (estimated to be fall 2012), the maple-leaved checkerbloom plant that would be impacted by construction would be relocated outside of the footprint of the construction project. The plant would be monitored for the duration of construction.

The two remaining maple-leaved checkerbloom populations would be designated as ESAs and would be protected during construction of the proposed project.

Tide Water Goby-Chinook Salmon-Central California Coast Coho Salmon-Northern California Steelhead

The implementation of the following avoidance measures would protect the Tidewater Goby, Chinook Salmon, Central California Coast Coho Salmon, Northern California Steelhead and its habitat during construction of the proposed project:

- Construction would occur between May 15 and October 15 of any construction season in order to minimize runoff during construction and to allow adequate time to restore and revegetate the sites following construction and prior to the onset of winter precipitation.
- Standard water quality Best Management Practices (BMPs) would be implemented in order to minimize the potential for erosion into waterbodies
- Prior to onset of construction, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared. The SWPPP would prescribe BMPs, appropriate to each culvert, in keeping with the BMPs described in Caltrans' Water Quality Handbook. A copy of the SWPPP would be sent to the

National Oceanic and Atmospheric Administration (NOAA) Fisheries at least 15 days prior to the start of construction.

- Areas disturbed for access and construction would be stabilized and revegetated at the completion of construction in order to minimize erosion and restore functions and values of the habitat.

Western Snowy Plover

To avoid impacts to the western snowy plover and potential nesting habitat on Seaside Beach, dune habitat outside of the construction footprint would be designated as ESAs and would be protected during construction. These ESA areas would be off limits to vehicles, construction staging materials, and construction related activities. A visible barrier such as orange construction fencing would be installed between SR 1 and the dunes to clearly identify the limits of dune habitat and prevent trucks and equipment from parking in these areas.

Sensitive Amphibians (Northern red-legged Frog and Foothill yellow legged frog)

Prior to the start of construction, a qualified biologist would conduct training for all construction personnel regarding sensitive amphibians. The training would include a description of the species and their respective habitats and the general measures that would be implemented to avoid and minimize impacts to the species.

A qualified biologist would survey the work site for sensitive amphibians no more than 48 hours before the onset of ground disturbing activities.

If sensitive amphibians are found during preconstruction surveys and do not leave the work area on their own, CDFG would be contacted. Methods to protect discovered amphibians may include relocation of the amphibian and/or exclusion buffers. If CDFG approves of moving the amphibian (s), a biologist with a scientific collecting permit would be allowed sufficient time to move the amphibians from the work site before activities begin.

To avoid any impacts to frogs that might inadvertently enter the area, wetlands and other waters of the U. S. adjacent to the construction zone that would not be filled as a result of the proposed project would be designated as ESAs and would be fenced to protect the area from inadvertent damage.

Special Status Invertebrates (Globose Dune Beetle and the Ten Mile Shoulderband)

To avoid impacts to the globose dune beetle and the Ten Mile shoulderband and their habitat, dune habitat outside of the construction footprint would be designated as ESAs and would be protected during construction. These ESA areas would be off limits to vehicles, construction staging materials, and construction related activities. A visible barrier such as orange mesh construction fencing would be installed between SR 1 and the dunes to clearly identify the limits of dune habitat and prevent trucks and equipment from parking in these areas.

Migratory Birds

Migratory birds may nest in trees and riparian vegetation within the project limits. To avoid impacts to migratory birds, trees and riparian vegetation would be removed from September 1 through February 1, which would be outside the migratory bird nesting season. If removal of trees and riparian vegetation within the time period of September 1 through February 1 is not feasible, a pre-construction survey for active bird nests would be conducted by a qualified biologist prior to the start of construction. If an active bird nest is found, construction would not begin at that location until after the chicks have fledged.

Wetlands and Other Waters of the U.S.

Regulatory Setting

Resources Under Potential USACE Jurisdiction

Under Section 404 of the Clean Water Act, waters of the U. S. include the following: territorial seas, coastal and inland waters, lakes, rivers and streams that are navigable and their adjacent wetlands, tributaries to navigable waters and their adjacent wetlands, interstate waters and their tributaries including adjacent wetlands, and all other waters of the U. S. (intermittent streams and prairie potholes).

USACE and the U. S. Environmental Protection Agency (EPA) jointly define wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Waters of the U. S. is the encompassing term for areas under federal jurisdiction as defined in Section 404 of the Clean Water Act. For the purpose of this report, waters of the U. S. are divided into jurisdictional wetlands and “other waters of the U. S.”

Resources Under California Coastal Commission (CCC) Jurisdiction

The California Coastal Commission (CCC) has adopted a one-parameter approach for delineating wetlands. The CCC considers a wetland to be any area that is sufficiently wet for a long enough period of time to support a preponderance of hydrophytic vegetation, wetland hydrology, or result in the development of hydric soils.

Title 14 CCR Section 13577 designates the following features to define the upper limits of wetlands:

- The boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover;
- The boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or
- In the case of wetlands without qualifying vegetation (including unvegetated wetlands) or soil, the boundary is between land that is flooded or saturated at some time each year and land that is not.

Affected Environment

The methodology set forth in the USACE 1987 Wetland Delineation Manual and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (2007 version, checked against May 2010 version) were used to delineate wetlands within the project limits. A positive determination for wetlands was made based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. The ordinary high water mark (OHWM) describes the limits of jurisdiction for waters of the U. S. The OHWM was identified based on a clear, natural line impressed on the bank, shelving, changes in the character of the soil or vegetation, or the presence of deposited litter or debris.

The *Wetland and Other Waters of the U. S. Delineation Report* (November 2008) prepared for this project was verified by USACE on June 26, 2009. The project’s BSA has since been modified, and a request for an updated verification would be submitted to USACE in March 2011.

The BSA was surveyed for the presence of wetlands under the jurisdiction of CCC. Various perennial and intermittent drainages, seasonal and perennials wetlands, and roadside ditches are present within the BSA. Table 5 summarizes the potential wetlands and other waters of the U. S. present within the BSA.

Table 5: Potential Wetlands and Other Waters of the U. S. within the BSA by Regulatory Jurisdiction

Resource	USACE Jurisdiction (acres)	CCC Jurisdiction (acres)
Wetlands	2.055	2.649
Other Waters of the U.S. (perennial and intermittent drainages, roadside ditches)	0.073	0.073
Total	2.128	2.722

A total of 2.055 acres of wetlands and 0.073 acres of other waters of the U. S. potentially under the jurisdiction of USACE are present within the BSA. A total of 2.649 acres of wetlands and 0.073 acres of other waters of the U. S. under the jurisdiction of the CCC are present within the BSA.

Environmental Consequences

Resources Under USACE Jurisdiction

The proposed project would permanently impact a total of 0.14 acres of waters of the U. S. potentially under the jurisdiction of USACE, 0.138 acres of which are wetlands. The proposed project would temporarily impact a total of 0.176 acres of waters of the U. S. potentially under the jurisdiction of USACE, 0.174 acres of which are wetlands. Final waters of the U. S. impact totals would be calculated after the wetland and other waters of the U. S. delineation is reverified by USACE.

Resources Under CCC Jurisdiction

Under CCC jurisdiction, the proposed project would permanently impact 0.147 acres and temporarily impact 0.221 acres of wetlands. The proposed project would also permanently impact 0.002 acres and temporarily impact 0.002 acres of other waters of the U. S. under CCC jurisdiction.

Table 6 summarizes the impacts to wetlands and other waters of the U. S. by resource agency jurisdiction.

Table 6: Impacts to Wetlands and Other Waters of the U. S. by Regulatory Jurisdiction

Resource	USACE Jurisdiction (acres)	CCC Jurisdiction (acres)
Wetlands		
Permanent Impacts	0.138	0.145
Temporary Impacts	0.174	0.221
Other Waters of the U. S.		
Permanent Impacts	0.002	0.002
Temporary Impacts	0.002	0.002
Total Permanent Impacts	0.14	0.147
Total Temporary Impacts	0.176	0.223

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

During the design of this project, efforts were made to avoid or minimize impacts to wetlands and other waters of the U. S. present within the BSA. The driveway for the Coastal Land Trust's property was to be relocated to the north end of the BSA, where a wetland/pond is located. To minimize impacts to this wetland area, the driveway would now consist of a pull-out rather than a full driveway and the pull-out was relocated to the south.

Wetlands and other waters of the U. S. adjacent to the construction zone that would not be filled as a result of the proposed project would be designated as ESAs and would be fenced to protect the area from inadvertent damage.

In order to prevent impacts to water quality during construction, the Contractor would be required to adhere to the standards and objectives for minimizing water pollution impacts set forth in Section 7-1.01G of the Caltrans Standard Specifications.

Mitigation Measures

Temporary impacts to wetlands and other waters of the U. S. would be mitigated through the restoration of the project area to pre-project conditions. Wetlands that are temporarily impacted during construction would be revegetated upon completion of project construction. Seeds or plant material from species that are appropriate for the project vicinity would be planted in these areas.

Permanent impacts to wetlands and waters of the U.S. would be mitigated by creating wetlands where the existing highway is realigned to the east, adjacent to existing wetlands, or by creating wetlands at a USACE or CCC approved location off-site, or through a combination of these efforts. Mitigation may also include restoration of wetlands, including removal of invasive plant species, on the adjacent Coastal Land Trust.

A Mitigation and Monitoring Plan (MMP) would be developed for the project and would outline the measures listed above as well as any new measures deemed appropriate given the final engineering drawings for the project.

With the required mitigation for this project, there would be no cumulative impacts to wetlands and waters of the U.S.

Cultural Resources

Regulatory Setting

The National Historic Preservation Act of 1966, as amended, (NHPA) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain

responsibilities to the Department. The FHWA's responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its rights-of-way.

Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

Affected Environment

A records search and literature review were conducted before the field studies to identify prior archeological investigations and previously recorded sites within and adjacent to the survey area. Sources consulted include the National Register of Historic Places (United States Government 1979 and supplements to date), California Historical Landmarks (State of California 1990 and supplemental information to date), California Points of Historical Interest (State of California 1992 and supplemental information to date), California Inventory of Historical Resources (State of California 1997), and California Register of Historic Resources (State of California 1976 and supplemental information to date).

A record search was conducted at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University in Rohnert Park on January 29, 2007. The records search area, which encompassed a ½ mi. radius around the project area, was delineated to identify all recorded historic and prehistoric sites, previous surveys, and other investigations within this area. The record search indicated a portion of the ESL on a privately owned parcel was previously surveyed and contains a previously recorded historic period archeological site. The site, CA-MEN-1818H, consists of remains of a homestead. Historic maps indicate that the project area lies within the former Mendocino Indian Reservation.

Archaeological field investigations identified two historic properties within the project APE:

CA-MEN-1818/H. CA-MEN-1818/H contains multiple components related to the late prehistoric, early historic, and historic periods. Phase II excavations revealed the presence of intact deposits and features. A radiocarbon date indicates that initial site use extends back 600 years. The early historic component probably relates to the Mendocino Reservation era (1855-1866) and contains traditional Native American stone tools and flakes in association with cow bone. A farmstead, which occupied the location between 1884 and 1959, mostly relates to the Bowman family. The family was of mixed heritage: the wife (Amelia) was of Wiyot ancestry, while the husband (Perry) was European American. Amelia Bowman held the title to the property, and the family eventually included twelve children. Materials related to their occupation of the farmstead reflect an admixture of traditional and non-traditional economic endeavors, including wage labor, subsistence farming, and gathering of wild resources.

CA-MEN-1818/H is eligible for listing on the NRHP under 36 CFR § 60.4(d) for its potential to yield information important to prehistory and history. No other farm owned by a Native American woman has been previously investigated within California and the presence of Late Prehistoric and Mendocino Reservation components adds to the importance of the site. The site has potential to address issues related to ethnic adaptations and identity as the Bowman family navigated between their traditional heritage and the dominant culture. The likely presence of tightly dated subsurface features, such as privies, has the potential to address research questions related to how the farmstead and economic strategies changed over time in response to the household life cycle and the larger economy.

CA-MEN-3382/H. This site, which is south of Seaside Creek and east of SR 1, is about 45.00 m (147.64 ft) north of CA-MEN-1818/H. The site deposit consists of a sandy shell midden that extends to at least 1.70 m (5.58 ft) below the ground surface. A flooding episode deposited a sterile sand layer between 0.80-0.90 m (2.62-2.95 ft) within the deposit. Phase II excavations recovered three bifaces, three cores, four shell beads, two bi-pointed bone gorges, and 94 pieces of debitage. The deposit contains a large amount of mussel shell (*Mytilus californianus*), smaller quantities of other shell species, and a small number of mammal bones. Excavations also yielded a minor amount of historic era materials, and two radiocarbon dates from above 0.80 m (2.62 ft) indicate that the deposit dates to at least A.D. 1300. An analysis of mussel

shell size suggests a pattern of intensive exploitation during the Sandhill Phase (A.D. 1300 to 1850) similar to studies of other sites in the region.

The Bowman family reportedly used the CA-MEN-3382/H location, which is within the boundaries of the roughly six acre farm that they owned. The Phase II study, however, was not able to determine whether the uppermost portion of the shell midden relates to this family. The deposit shows a lengthy occupation, has integrity, and contains a variety of artifacts and dietary remains. The site is eligible for listing on the NRHP under 36 CFR § 60.4(d) for its potential to yield information important to prehistory and history.

In addition, a record search of the sacred lands file of the Native American Heritage Commission did not indicate the presence of Native American cultural resources in the vicinity. Representatives of local Native American groups were contacted regarding any heritage values associated with the project location. These contacts, based on an updated list of Native American contacts provided by the Native American Heritage Commission, consisted of letters from Caltrans dated June 14, 2007 and a series of follow-up phone calls. A field visit within the project area was conducted between Mr. Thad Van Bueren, Caltrans archeologist, and Ms. Harriet Stanley-Rhoades of the Noyo River Indian Community on June 21, 2007.

Mr. Jeremy Center of the Noyo River Indian Community monitored Phase II excavations within sites CA-MEN-1818/H and -3382/H during September 2007. Ms. Stanley-Rhoades also reviewed the Phase II evaluation report.

Environmental Consequences

Caltrans determined that two archeological sites (CA-MEN-181H and CA-MEN-3382H) within the area of potential effects are both eligible for listing in the National Register of Historic Places for their potential to yield information important to prehistory and history. The State Historic Preservation Officer concurred with Caltrans' findings in a letter dated August 30, 2010.

Planned project activities extend into areas known to contain archeological features and deposits associated with the eligible site CA-MEN-1818/H, while avoiding disturbance of site CA-MEN-3382/H. The Area of Direct Impact (ADI) for the undertaking is defined as encompassing the buffer zone and other construction areas for the project. The ADI does not include all of the new right of way that is being acquired and, for that reason, protective temporary fencing will be required along the

ADI limit as a first order of work during project construction to prevent impacts outside of that construction zone.

Impacts to the portion of CA-MEN-1818/H within the ADI include grubbing, grading, installing a geosynthetic reinforced embankment (GRE), filling, heavy equipment operation, and installing fence lines. The depth of those impacts would vary across the ADI. In most affected portions of the site disturbance is not expected to extend deeper than 12 inches below the present surface. The disturbance would be caused by grubbing, removal of some soil to key in the new fill deposits, and equipment traffic.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures

It is Caltrans policy to avoid impacts to cultural resources whenever possible and it may be necessary to make special provisions to avoid impacts to sites that are adjacent to project limits. Further investigations may be needed for sites that cannot be avoided by the proposed project. It is possible that unidentified subsurface archeological remains exist within the right-of-way and could be encountered during ground-disturbing activities. If buried cultural materials are encountered during construction, it is Caltrans policy that work in the immediate vicinity of the find halt until a qualified archeologist can evaluate the nature and significance of the find.

In order to eliminate or minimize the potential to affect those portions of CA-MEN-1818/H and CA-MEN-3382/H outside of the ADI, Caltrans will protect these areas by designating them as Environmentally Sensitive Areas (ESAs), which shall be described in information included in the final construction plans of the Undertaking. These areas will be enclosed within temporary plastic ESA fencing with laminated “Keep Out” signs. Caltrans shall further ensure that: 1) construction activities within 50 feet of the properties shall be monitored by an archaeologist and Native American monitor; and 2) the integrity of the fence line as installed will be monitored by the archaeologist throughout the duration of the construction activities in the vicinity of the sites.

Within 30 days after Caltrans has determined that all fieldwork required under stipulation II has been completed, Caltrans will ensure preparation, and concurrent distribution to the other MOA parties, for review and comment, a brief letter report that summarizes the field efforts and the preliminary findings that result from them.

Within 12 months after Caltrans has determined that all fieldwork required by stipulation II.A has been completed, Caltrans will ensure preparation, and subsequent concurrent distribution to the other MOA parties, for review and comment, a draft technical report that documents the results of implementing and completing the DRP and any addendum to the DRP. The other MOA parties will be afforded 30 days following receipt of the draft technical report to submit any written comments to Caltrans. Failure of these parties to respond within this time frame shall not preclude Caltrans from authorizing revisions to the draft technical report, as Caltrans may deem appropriate. Caltrans will provide the other MOA parties with written documentation indicating whether and how the draft technical report will be modified in accordance with any comments received from the other MOA parties. Unless any MOA party objects to this documentation in writing to Caltrans within 30 days following receipt, Caltrans may modify the draft technical report, as Caltrans may deem appropriate.

Copies of the final technical report documenting the results of DRP implementation will be distributed by Caltrans to the other MOA parties, to the Northwest Information Center of the California Historic Resources Information System (CHRIS), and to the Noyo River Indian Community and Sherwood Valley Rancheria.

If Caltrans determines during the implementation of the DRP or after construction of the Undertaking has commenced, that either the implementation of the DRP or the Undertaking will affect a previously unidentified property that may be eligible for the National Register, or affect a known historic property in an unanticipated manner, Caltrans shall address the discovery or unanticipated effect in accordance with 36 CFR § 800.13(b). Caltrans at its discretion may hereunder and in accordance with 36 CFR § 800.13(c), assume any discovered property to be eligible for inclusion in the National Register.

Mitigation Measures

Caltrans will resolve potential adverse effects to the sites by executing a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO). The MOA, which includes stipulations to take into account the proposed project's effects on historic properties, calls for (1) archaeological excavations within the impacted portion of CA-MEN-1818/H as detailed in a data recovery plan and (2) establishment of ESAs to protect those portions of CA-LAK-1818/H and -3382/H outside of the ADI from inadvertent damage during project construction.

The MOA was recently signed by the State Historic Preservation Officer and the Chief, Division of Environmental Analysis, for Caltrans. Concurring parties to the MOA include Caltrans District 01, the Sherwood Valley Rancheria of Pomo Indians, and Noyo River Indian Community.

Coastal Zone

Regulatory Setting

This project is in the coastal zone. The Coastal Zone Management Act of 1972 (CZMA) is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA; they include the protection and expansion of public access and recreation, the protection, enhancement and restoration of environmentally sensitive areas, protection of agricultural lands, the protection of scenic beauty, and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own local coastal programs (LCPs). LCPs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A federal consistency determination may be needed as well.

Within the Mendocino County LCP, Chapter 20.496 of the coastal zoning code includes policies that apply to Environmentally Sensitive Habitat Areas (ESHAs). Buffer areas are described in Section 20.496.020 as an area that shall be established adjacent to all ESHAs. The purpose of the buffer area shall be to provide for a sufficient area to protect the ESHA from degradation resulting from future developments. The width of the buffer area shall be a minimum of 100 feet, unless an applicant can demonstrate, after consultation and agreement, with the California

Department of Fish and Game (if applicable), and Mendocino County Planning Department, that 100 feet is not necessary to protect the resources of that particular habitat area and the adjacent upland transitional habitat function of the buffer from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the ESHA and shall not be less than 50 feet in width. This section describes a variety of standards of determining the allowable width of the buffer area, including standards for development permitted within the buffer area. Mendocino County Code Section 20.496.025 (7) further specifies development that is allowed in wetlands, including incidental public service purposes.

Affected Environment

Botanical and biological surveys were conducted within the area extending 100-feet around the project's Environmental Study Limits (ESL) to satisfy the conditions of the Coastal Element of the Mendocino County General Plan. Fifteen areas within the 100-foot study buffer of the projects ESL meet the definition of "Environmentally Sensitive Habitat Areas" as detailed in the Coastal Element of the Mendocino County General Plan (see Mendocino County Code sections 20.496 & 20.532.060).

Eight wetlands were delineated within the 100-foot study buffer of the project's ESL. Each of these wetlands was delineated as a separate ESHA: ESHA 1 through 8. These eight areas meet the definition of ESHAs as detailed in the Coastal Element of the Mendocino County General Plan (see Mendocino County Code chapters 20.496 & 20.532).

Three locations of maple-leaved checkerbloom (*Sidalcea malachroides*) are present within the 100-foot study buffer of the project's ESL. Each of these locations was delineated as a separate ESHA: ESHA 9, 10, and 11. Maple-leaved checkerbloom is a California Native Plant Society (CNPS) List 4 species. List 4 species are of limited distribution (Watch List). Maple-leaved checkerbloom is not listed as a threatened or endangered species by either the California Department of Fish and Game or the U. S. Fish and Wildlife Service. ESHA 9, 10, and 11 meet the definition of ESHAs as detailed in the Coastal Element of the Mendocino County General Plan (see Mendocino County Code chapters 20.496 & 20.532).

Three perennial drainages (OWUS-P1, OWUS-P2, and OWUS-P3) and three intermittent drainages (OWUS-I1, OWUS-I2, and OWUS-I3) are present within the 100-foot study buffer of the project's ESL. These drainages were delineated as four

separate ESHAs: ESHA 12, 13, 14, and 15). ESHA 12, 13, 14, and 15 meet the definition of ESHAs as detailed in the Coastal Element of the Mendocino County General Plan (see Mendocino County Code chapters 20.496 & 20.532).

The Environmentally Sensitive Habitat Areas (ESHA) Report, as required by Mendocino County, will be prepared prior to the permit applications.

Environmental Consequences

One of the maple-leaved checkerbloom plants would be impacted by the construction of this project. This plant is located on the Coastal Land Trust's parcel. During the fall prior to the start of construction (estimated to be fall 2011), this plant would be relocated outside of the footprint of the construction project. The plant would be monitored for the duration of construction.

The two remaining maple-leaved checkerbloom populations would be designated as ESAs and would be protected during construction of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

With avoidance measures in place, the proposed project would not affect the maple-leaved checkerbloom.

With avoidance measures in place, the proposed project would not affect the remaining drainage and wetland ESHA's.

Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on the natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project

- The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

This project is located in Mendocino County approximately 0.35 miles north of Ten Mile River on the Pacific Ocean, mapped on USGS quadrangle map Inglenook, reference code 39123-E7-TF-024. The Seaside Creek watershed in this area is low gradient to moderately steep sloped, and vegetated with grassy slopes and conifers. For Stormwater purposes the hydrologic unit is Mendocino Coast, the Area is Rockport, the Hydrologic sub area is Ten Mile River.

The culvert at PM 70.65 lies on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community-Panel Number 060183 0425 B. The inlet is in Zone A, an area within the 100 year flood event probability. No Base Flood Elevations (BFE's) have been established along this portion Seaside Creek. The outlet is in Zone C, an area of minimal flood hazard.

The existing 48 inch Corrugated Metal Pipe (CMP) culvert is located at the 25 foot elevation just north of a bend in MEN 1. The pipe is obstructed with sand and debris, with a small amount of flow moving through the debris. The inlet was not observed, as it is in a willow thicket. That portion of the pipe that can be observed is rusted and damaged. The pipe is shallow and outlets onto Rock Slope Protection (RSP). The culvert conveys runoff from the roadway and a semi-rural subdivision. Historical records indicate a channel was cut from south to north across what is now a wetland area on Coastal Land Trust Property, to outlet into Seaside Creek. This channel appears to reduce the flow to PM 70.65 and contribute to wetland hydrology.

Environmental Consequences

No adverse floodplain impacts are anticipated due to the proposed project.

Avoidance/Minimization Measures

Replace the existing culvert at PM 70.65 with a 48" Alternative Pipe Culvert (APC).

Place rock slope protection at the culvert outlet as designed in the California Bank and Shore Rock Slope Protection Manual

Place debris rack at the inlet.

Geology/Soils/Seismic/Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act.

Affected Environment

A geotechnical field investigation was undertaken in December 2008 to characterize the site and obtain information about subsurface soils, ground water, corrosion, site-specific seismic data, and other pertinent geological information. The information and data obtained from the subsurface investigation was used for the proposed storm damage design. Lack of subsurface soil and water information did result in more conservative assumptions for the embankment design. No previous geotechnical investigations have been performed at this site.

Drilling was performed on roadway (north bound lane) December 2008/January 2009 to a depth of 70 –80 feet below roadway surface.

Due to access restrictions on drilling outside of state highway right-of-way, a Wacker (hand equipment) Sampler was used to drill the holes on the Mendocino Land Trust property. Three Wacker holes were drilled to a depth of approximately 30 feet for each hole.

Foundation conditions from the investigation and lab testing results are summarized as follows:

- Approx. 0-30 ft below roadway soil consists of medium to dense Sandy Clay/Clayey Sand w/ Gravel.
- Rock was encountered 30 to 40 feet below roadway surface, and is described as alternating layers of weathered, fractured sandstone and shale.

The existing roadway is a narrow bench constructed adjacent to an upraised marine terrace. Due to storm damage, significant erosion of the existing slopes has contributed to destabilization of the roadway structural section.

Environmental Consequences

Construction of a retaining wall and geosynthetic reinforced slopes would stabilize the roadway embankment slopes, while also allowing for geometric and drainage improvements within a smaller footprint than would be needed for standard embankment construction.

This project would not increase velocity or volume of downstream flow. In fact, this project would reduce the amount of impervious area. Thus, completion of this project would result in reduced storm water flow.

Avoidance/Minimization Measures

An Erosion Control Plan would be required: permanent erosion control would be applied on all disturbed soil surfaces as recommended by the District Landscape Architect.

Re-vegetated surfaces would utilize the seed mixture, mulch, tackifier, and fertilizer recommended by the District Landscape Architect.

Rock slope protection would be placed above the embankment slope for stabilization.

Permanent erosion control shall be applied on all disturbed soil surfaces as recommended by the District Landscape Architect.

Visual Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 USC 4331[b][2]). To further emphasize this point, the Federal Highway administration in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities.” (CA Public Resources Code Section 21001[b])

In addition, Caltrans' policy on "Context Sensitive Solutions" directs designers to consider the proposed project's surroundings and develop transportation solutions that are compatible with those surroundings.

California State Route 1 is one of the most highly scenic roadways in the state. The Mendocino County Board of Supervisors approves the regulations (zoning codes) recommended by the Mendocino County Planning Commission on where and how development can occur along the coastal plains. Sec. 20.504.010 of the Visual Resource and Special Treatment Areas section of the Mendocino County Coastal Zoning Code states:

"The purpose of this section is to insure that permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in visually degraded areas."

The visual quality along the existing alignment is highly scenic and the final project design should minimize the effect on the visual setting. This section of Route 1 has been found 'Eligible' for scenic highway designation on the California Scenic Highway System. It is also part of the Pacific Coast Bike Route and gets a sizable amount of touring bicyclists during the summer. The overall visual quality of this area is extremely high.

Affected Environment

The immediate area is located overlooking the Pacific Ocean in Mendocino County. Views within the project area range from expansive views westward of the Pacific Ocean, the coastal bluffs to the north and south and the Coast Range which rises above the shoreline to the east. Along this section of Route 1 the traveling public experiences a mix of rural residential properties spread out among mostly undeveloped landscape. The roadway winds along the coast traversing pockets of forested areas followed by large expanses of ranches and grasslands. Small grade changes are common as the road follows the mountainous coastline. Views of the Pacific Ocean are common although they are often blocked as the roadway winds through woodlands and residential areas or traverses areas farther away from the coastline.

Vegetation coverage within the project area is classified as the coastal prairie plant community which includes mostly perennial bunch grasses with other herbaceous plants common on the landscape. Most of the shrubs and trees including cypress and shore pine visible in the project area were planted by local residents and are not

native to the coastal bluff ecosystem. The forest edge is visible in the middle and background. To the north, riparian woodlands which include redwood, Douglas fir, big leaf maple, willow and alder follow the major stream corridors and the redwood forest is visible farther inland towards the east.

The southern third of the project area is rural residential in character. Approximately ¼ mile south of the project location, Route 1 crosses over the Ten Mile River Bridge. The roadway then climbs a minor grade to Ocean Meadows which consists of architecturally interesting houses with well maintained yards which are visible in the foreground and middleground east and west of the highway. Roadside ditches are mostly lined with mowed grass with some patches of shrubs where the slopes are too steep or hard to access to mow. Views of the Pacific Ocean are hindered by the residential development and topography. The Coast Range is clearly visible in the background towards the east.

As the roadway approaches a sharp ninety degree curve towards the west, it begins a steep descent approximately 100 feet to Seaside Beach. Views on the left side of the roadway are limited to the foreground where a vegetated cutslope rises above the roadway with homes located in Ocean Meadows slightly visible at the top of the slope. Views on the right open up to include the Seaside Creek floodplain, Seaside Beach and a cluster of trees which line the northern edge of the floodplain. There is limited development in this area except for a narrow unimproved parking area adjacent to the beach. There is existing metal beam guardrail (MBGR) adjacent to the highway at the top of the bluffs. The existing MBGR and roadway is in poor shape due to errant vehicles and the slope failure events which require this project. At the base of the hill, the roadway makes a sharp turn towards the north where it parallels Seaside Beach towards to the west. To the east, Seaside Creek and its surrounding wetlands are visible in the foreground and the coastal bluffs and Coast Range are visible in the middle and background.

Southbound traffic exits through a grove of trees which open up with views of Seaside Beach to the right and the Seaside Creek floodplain to the left. The bluffs rise above the floodplain to the south with Route 1 ascending the slope towards the southeast. Existing cut and fill slopes are mostly vegetated with coastal shrub species although there is black material placed on the slopes where non-native vegetation is being removed.

Environmental Consequences

Alterations to the existing viewshed by the proposed project in the southern third of the project include widening of the highway to standards and the re-contouring of roadside ditches to improve draining during rain events. The traveling public will notice wider shoulders with uniform and flatter drainage swales on both sides of the roadway. The newly graded slopes would be covered with native grasses.

At the upper half of the grade, alterations to the existing visual character created by the construction will include a soldier pile tieback wall with a Modified ST-10 safety barrier located at the top of the wall adjacent to the highway. The retaining wall is 350 feet in length and has a maximum height of 35 feet. Views of the retaining wall will be minimized by the covering the lower portion of the wall with a vegetated berm. In order to further minimize the visual impacts of the retaining wall, vertical wailers will be located at each I-Beam location in lieu of horizontal wailers normally constructed with tieback walls. The vertical wailers would be formlined with a rough hewn timber type texture and stained to match the color of the timber infill. The vertical wailers would stick out approximately 1.5 feet from the wall surface and be circular in shape similar to the form of a log.

Modified ST-10 Rail is 33 inches high with two 4 inch high horizontal steel rails and a 6 inch high concrete foundation. The steel posts are spaced at 10 feet and there is a 19 inch window between the posts, rail and foundation. When viewed from the highway, the ST-10 has 57% window area and 43% solid surface.

Along the lower half of the grade, a GRE slope will be constructed below the roadway as the roadway descends to Seaside Beach. The process for constructing a GRE slope is identical to standard slope construction techniques, except that layers of an engineered reinforcement material (geogrid) is included at specified intervals. The GRE slope will have a maximum height of 35 feet and length of 400 feet. The slope will be covered with plantable soil and have a finished grade of 1.5:1. Some spot locations may be steeper than 1.5:1 to avoid impacting existing wetland vegetation.

The project design includes four foot shoulders and a 12 foot wide constructed wetlands on the right side of the highway that extends from the top of the grade to the beach where the alignment turns towards the north. It will be stepped with check dams at each grade drop and covered with native wetland vegetation. The shoulder on the right side of the highway will be paved to the edge of the fill slope.

Northbound travelers will not see the tieback wall however, southbound traffic may slightly see the western end of the retaining wall although most of the wall will be facing north and out of view from the highway neighboring residences. The finished

GRE slope will be vegetated with native vegetation and will appear similar to the existing slope.

Avoidance/Minimization Measures

The steel I-Beams and the concrete walers on the soldier pile tieback wall should be stained dark brown to match the color of the timber infill. A new chemical stain for MBGR has been approved for use on state highway projects. The PDT should consider the use of this treatment upon consultation of the Coastal Commission and the Mendocino County planning department.

Climate Change

Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO₂), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by EPA in December 2007. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that EPA will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. This standard is the same standard that was proposed by California, and so the California waiver request has been shelved.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHG as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all

past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

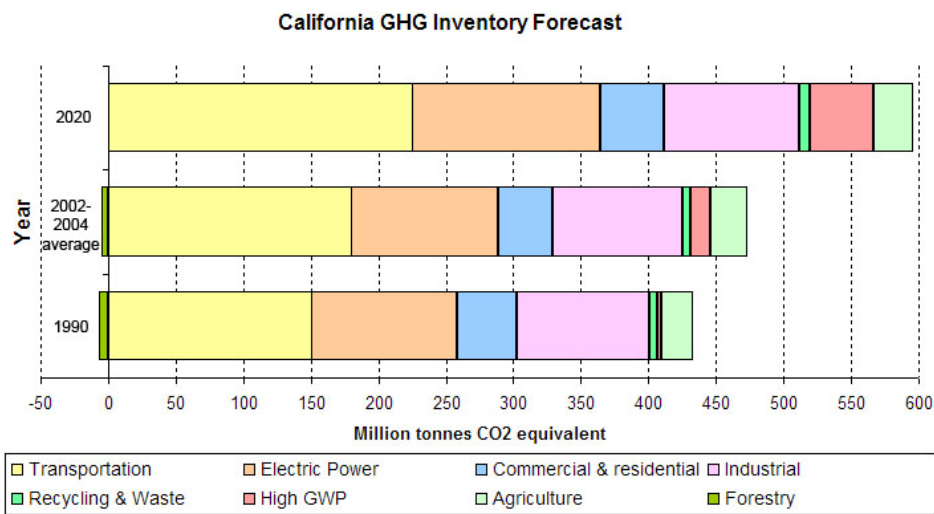


FIGURE 2-1 CALIFORNIA GREENHOUSE GAS INVENTORY

Taken from : <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.

This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>

Environmental Consequences

The proposed project is a storm damage repair project along MEN-1 in Mendocino County. The scope of work consists of construction a tieback retaining wall and fill slope along the northbound side of Highway 1. In addition, the project also consists of realigning the highway slightly through the project area, replacing the metal beam

guardrail MBGR), improving the drainage system and rebuilding the structural section of the road. The proposed project is not capacity increasing and will not increase operational CO2 emissions, therefore this project will have low to no potential for climate change impacts.

Climate Change

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as CARB works to implement the Governor's Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$238.6 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding through 2016.¹ As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

¹ Governor's Strategic Growth Plan, Fig. 1 (<http://gov.ca.gov/pdf/gov/CSGP.pdf>)



Figure 2-2 Outcome of Strategic Growth Plan

As part of the Climate Action Program at Caltrans (December 2006, <http://www.dot.ca.gov/docs/ClimateReport.pdf>), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by EPA and CARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the UC Davis.

Adaption Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change.

The California Resources Agency (now the Natural Resources Agency, (Resources Agency)), through the interagency Climate Action Team, was directed to coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, Resources Agency was directed to request the National Academy of Science to prepare a *Sea Level Rise Assessment Report* by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- a discussion of future research needs regarding sea level rise for California.

Furthermore Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding the next five years (through 2013), or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement.)

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. The Department is an active participant in the efforts being conducted as part of Governor's Schwarzenegger's Executive Order on Sea Level Rise and is mobilizing to be able to respond to the National Academy of Science report on *Sea Level Rise Assessment* which is due to be released by December 2010. Currently, the Department is

working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, the Department will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

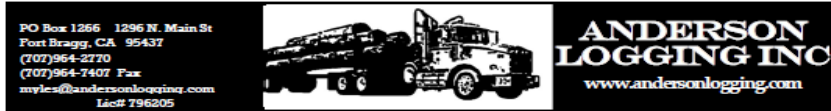
Chapter 3 - Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify potential impacts and mitigation measures and related environmental requirements. This chapter summarizes the results of the Department's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

The Initial Study with Proposed Mitigated Negative Declaration was made available for public and agency review and comment from December 6, 2010 to January 3, 2011. Caltrans has ensured that the document was made available to all appropriate parties and agencies, including the following: 1) Responsible agencies, 2) Trustee agencies that have resources affected by the project, 3) other state, federal and local agencies which have regulatory jurisdiction, or that exercise authority over resources which may be affected by the project, 4) the general public. Copies of the document were made available at the Caltrans District 1 Public Information Office, 1656 Union St., Eureka, CA 95501, at the Mendocino County Library in Ft. Bragg and via the Internet at www.dot.ca.gov/dist1/d1projects/envdocs.htm

Caltrans did receive comment letters on the project. The comments and responses begin on page 59.

Comment Letter 1 – Anderson Logging



12/17/10

Ms. Susan D. Bauer
Environmental Branch M-1
California Department of Transportation
703 B Street Marysville, CA 95901

RE: Highway 1 Seaside Creek Storm Damage Repair Project,
Project No. 01-0000-3331-1 EA 01-474901

I have read the document "Initial Study with Proposed Mitigated Negative Declaration" for the above mention Caltrans project and would like to comment on a lacking part of the analysis. The moving of oversized equipment through this project was not addressed and is of concern to me and I would like to know how this will be handled during this project. This is a very narrow piece of road and as proposed I do not see how an oversized load will fit through this area while under construction.

A significant portion of Commercial Timberland is accessed via Hwy 1 north of this portion of road and alternative access is non existent. The bridge that crosses the Eel River on Hwy 1 by Leggett has a limit of legal weight only, cutting us off from the north and access through Branscomb road is very limited to width by the Trees at "Admiral Standley State Recreation Area." The seasonality of our industry and market conditions make our survival hinge on the ability to access timber with the necessary equipment on a moments notice. Limiting oversize load movement through this area has the potential to leave a piece of equipment stranded in this area and impact dozens of jobs or keeping these same people from accessing potential work.

Having operated logging trucks through Caltrans closures on Highway 1 I have faith in efficiently getting through these temporary closures however the oversize movement restriction could cause significant issues to operations and jobs in our area. Perhaps a simple cooperation for scheduling moves through this with advance notice could be incorporated into the plan. The installation of K-rail through this area could make it extremely difficult to carry this out. I am representing over 100 people employed at this company and their families, hoping that this project will not close off access to this area for equipment.

Thank you and I look forward to your response.

Sincerely,

Myles Anderson
Anderson Logging, Inc.

Page 1 of 1

Response to Comment Letter 1 – Anderson Logging

Comment: Anderson Logging expressed concerns regarding the movement of oversized equipment through the project area and they would like to know how it will be handled.

Response : Caltrans will coordinate with Anderson Logging for moving oversize equipment through the project area during construction.

Comment Letter 2 – North Coast Water Quality Control Board



Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board North Coast Region Geoffrey M. Hales, Chairman

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135



Arnold
Schwarzenegger
Governor

December 21, 2010

Ms. Susan D. Bauer
California Department of Public Transportation
District 3
703 B Street
Marysville, CA 95901

Dear Ms. Bauer:

Subject: Comments on the proposed Mitigated Negative Declaration for the Highway 1 Seaside Creek Storm Damage Repair Project, SCH No. 2010122018

Thank you for the opportunity to comment on the proposed Mitigated Negative Declaration (MND) for the Highway 1 Seaside Creek Storm Damage Repair Project. The North Coast Regional Water Quality Control Board (Regional Water Board) is a responsible agency for this project, with jurisdiction over the quality of ground and surface waters (including wetlands) and the protection of the beneficial uses of such waters.

The proposed project consists of replacing an existing pull-out, realigning the roadway, rebuilding a structural section of the road, relocating overhead utilities, and replacing a metal beam guardrail (MBGR). The project also includes constructing a retaining wall and a geosynthetic reinforced (GRE) slope, and improving drainage systems including replacing two culverts.

Measures to address potential water quality impacts are described below. The Regional Water Board recommends addressing these concerns through the identification of adequate mitigation.

Waters of the State

The MND should include the definition of "waters of the state" in addition to that of "waters of the United States" when discussing impacts that may require mitigation. The Regional Water Board's Water Quality Control Plan for the North Coast Basin (Basin Plan) and the California Water Code define waters of the state as follows: "Waters of the state" refers to any surface water or groundwater, including saline waters, within the boundaries of the state (Water Code §13050 (e)). This definition is broader than that of

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"waters of the United States" and consequently should always be acknowledged and considered when determining impacts upon water resources.

Wetlands

Page 33 of the Initial Study for the MND states that 0.436 acres of wetlands will be permanently impacted and 0.81 acres of wetlands will be temporarily impacted. Individual stream and wetland systems are part of complete aquatic ecosystems through interaction of surface and subsurface hydrologic connections, healthy systems perform functions that protect and enhance watershed-wide water quality. In addition, surface waters provide habitat that supports a variety of plant and animal life for rare and endemic species. It is imperative that all State agencies meet the State's official "no net loss" policy (Executive Order W-59-93), which not only calls for preservation of existing wetlands, but an overall net gain of functions and acreage. Please note that typical off-site wetland mitigation is at least 3:1 for creation. Wetland mitigation projects that propose enhancement and restoration of existing wetlands shall be reviewed on a case by case basis and will typically result in a higher mitigation ratio than wetland creation proposals.

Riparian Habitat

When riparian habitat is removed, it can change local microclimates, soil moisture, ground cover, impact wildlife habitat, increase water temperature, destabilize stream banks and channels and increase erosion. Riparian areas between streams and wetlands and their adjoining environments play critical roles in protecting and enhancing water quality. An important tool for reducing and avoiding impacts to surface waters is the implementation of a buffer area of native and riparian vegetation between any construction activities or structures and surface waters. The Regional Water Board and the United States Environmental Protection Agency (EPA) recommend a *minimum* setback of 100 feet from the top of bank of a stream, watercourse or the edge of a wetland. The project should delineate buffer zones of at least 100 feet for all perennial and seasonal surface waters. Setbacks should be vegetated and undisturbed or enhanced with native plants.

Storm Water

The Regional Water Board strongly recommends utilizing Low Impact Development (LID) techniques to treat storm water runoff. We have included a list of LID resources for your reference. This is particularly important for projects close to surface waters.

LID is a development site design strategy with a goal of maintaining or reproducing the pre-development hydrologic system through the use of design techniques to create a functionally equivalent hydrologic setting. LID emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to

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more closely reflect pre-development hydrologic functions. Hydrologic functions of storage, infiltration, and ground water recharge, as well as the volume and frequency of discharges, are maintained through the use of integrated and distributed storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of flow paths and runoff time. LID seeks to mimic the pre-development site hydrology through infiltration, interception, reuse, and evapotranspiration.

LID requires that the storm water runoff volume from small storms be retained onsite. Other LID strategies include the preservation and protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable trees, flood plains, woodlands, native vegetation and permeable soils. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water runoff. Other benefits from LID implementation include reducing global warming impacts from new development (preserving carbon sequestering in native soils and retaining native vegetation), increasing water supply (by encouraging ground water recharge) and reducing energy consumption.

LID requires the use of landscape-based Best Management Practices (BMPs) that filter storm water runoff using vegetation and amended soil prior to infiltration. Examples of these types of BMPs are rain gardens and vegetated swales. Landscape based BMPs need to be sized to treat the storm water runoff from all impervious surfaces (e.g. roads, driveways and parking areas, roofs, walkways, patios) using the following sizing criteria:

1. The volume of runoff produced from the 85th percentile of 24-hour storm event, as determined from the local historical rainfall record; or
2. The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined using the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, p. 170-178 (1998); or
3. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook-Industrial/Commercial (1993).

BMPs to prevent the release of sediment or hazardous materials during construction activities should be included in the Negative Declaration to prevent sediment laden storm water from reaching any streams. These can include scheduling construction to take place during the dry season, identifying staging areas for work vehicles that are separated from sensitive areas, training employees in procedures for cleaning up spills of hazardous materials, and other techniques.

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The following permits may be required by our agency:


Construction General Storm Water Permit: Land disturbances on projects of one acre or more require coverage under the construction general storm water permit. If the land disturbance will be one acre or more, the owner of the property will need to apply for coverage under this permit prior to the commencement of activities on site. This permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies BMPs to implement and maintain to minimize pollutant discharges from a construction site. The permit also requires a risk level analysis for the project based on erosion risk and sensitivity of the receiving waters, inspections of construction sites before and after storm events, and every 24 hours during extended storm events, storm event monitoring, and electronic document and data submittal. The permit requires the use of Low Impact Development to treat post-construction storm water runoff from impervious surfaces. Owners may find the permit at http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

Waste Discharge Requirements (WDRs) or a Conditional Waiver of WDRs: Under authority of the California Water Code, the Regional Water Board may issue WDRs for any project which discharges or threatens to discharge waste to waters of the state. Projects that impact waters of the state (including discharges of post-construction storm water runoff, grading activities within stream courses or wetlands, and removal of riparian vegetation in some cases) require permitting by the Regional Water Board. The Regional Water Board may also require permits for on-site septic systems accepting 1,500 gallons or more per day. An application may be printed from the State Water Resource Control Board website at: www.swrcb.ca.gov/sbforms/.

If you have any questions or comments, please contact me at (707) 576-2835 or jpuget@waterboards.ca.gov

Sincerely,



 Jeremiah Puget
Water Resources Control Engineer

101221_BG_Hwy1stmrepair

cc: Scott Morgan, State Clearinghouse, P.O. Box, 3044, Sacramento, CA 95812
Re: SCH No. 2010122018

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Low Impact Development Resources

Santa Rosa's Storm Water Program and LID Technical Manual (in development with the North Coast Regional Water Board):

www.srcity.org/stormwaterpermit

www.srcity.org/stormwaterLID

Low Impact Development Center: <http://www.lowimpactdevelopment.org/>

Puget Sound LID manual: http://www.psp.wa.gov/downloads/LID/LID_manual2005.pdf

Green Infrastructure Municipal Handbooks:

<http://cfpub2.epa.gov/npdes/greeninfrastructure/munichandbook.cfm>

Oregon Rain Garden Guide, landscaping for clean water and healthy streams:

<http://seagrant.oregonstate.edu/sqpubs/onlinepubs/h10001.pdf>

Pennsylvania Stormwater BMP Manual:

<http://www.blairconservationdistrict.org/SWBMP.htm#pa%20manual>

San Diego County's LID manual – LID for roads: <http://www.sdcounty.ca.gov/dplu/docs/LID-Handbook.pdf>

Low Impact Development – Sustainable Storm Water Management:

http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/

EPA Green Infrastructure Basic Information:

<http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm>

Managing Wet Weather with Green Infrastructure:

http://cfpub.epa.gov/npdes/home.cfm?program_id=298

Contra Costa Manual and Guidance to Municipalities:

<http://www.cccleanwater.org/new-developmentc3/stormwater-c3-guidebook/>

Contra Costa approach powerpoint to implement LID:

<http://www.cccleanwater.org/Publications/StormCon-5-06/5-ContraCostaApproach-I-Dalziel-Cloak.ppt>

Portland Stormwater Management Manual:

<http://www.portlandonline.com/bes/index.cfm?c=47952>

City of Portland's Sustainable Storm Water Management Program – LID for streets:

<http://www.portlandonline.com/bes/index.cfm?c=34598>

Streetscape improvements and water quality design:

<http://www.lowimpactdevelopment.org/nhb/lid.htm>

LID Urban Design tools – design software for different BMPs: <http://www.lid-stormwater.net/homedesign.htm>

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LID design fact sheet: <http://www.coastal.ca.gov/nps/lid-factsheet.pdf>

Storm Water Runoff Calculator: <http://www.stormulator.com>

Storm Water Management and LID at EPA headquarters – BMP choice and design:
http://www.epa.gov/owow/nps/lid/stormwater_hq/

Governor's Office of Planning and Research Technical Advisory using LID to protect water quality through CEQA review: http://www.opr.ca.gov/ceqa/pdfs/Technical_Advisory_LID.pdf

State Water Board Resolution on LID and Sustainable Water Resources Management:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2008/rs2008_0030.pdf

Resolution of the California Ocean Protection Council Regarding Low Impact Development:
http://www.resources.ca.gov/copc/05-15-08_meeting/05_LID/0805COPC05_%20LID%20Res%20amended.pdf

Storm Water Resources:

North Coast Regional Water Board Municipal Storm Water Program:
http://www.waterboards.ca.gov/northcoast/water_issues/hot_topics/santa_rosa_ms4_npdes_stormwater_permit/

State Water Board Storm Water Program:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/

California Stormwater Quality Association: <http://www.casqa.org/>

EPA Storm Water Program: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Erase the Waste Campaign – California Storm Water Toolbox (outreach materials for permittees and non-profits):
http://www.waterboards.ca.gov/water_issues/programs/outreach/erase_waste/

The San Francisco Regional Water Board Storm Water Resources Website:
http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/avail_docs.shtml

State Water Board Storm Water Grant Program:
http://www.waterboards.ca.gov/water_issues/programs/grants_loans/prop84/index.shtml

Federal Funding Sources for Watershed Protection: <http://cfpub.epa.gov/fedfund/>

Stormwater Manager's Resource Center: <http://www.stormwatercenter.net/>

For more information, please contact Jeremiah Puget at JPuget@waterboards.ca.gov

Updated: August 28, 2010

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Responses to Comment Letter 2 – North Coast Water Quality Control Board

Comment #1 (Biology): *“The MND should include the definition of “waters of the state” in addition to that of “waters of the United States” when discussing impacts that may require mitigation.”*

Response #1 (Biology): The following definition for “waters of the state” has been added to the MND in the Biological Resources section, Regulatory Setting, page 8: “According to Section 13050 of the California Water Code, waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.” Additionally, the *Wetlands and Other Waters of the U. S.* section of the MND, including Tables 5 and 6 on pages 33 and 34 have been updated to address waters of the state.

Comment #2 (Biology): *“...It is imperative that all State agencies meet the State’s official “no net loss policy (Executive Order W-59-93), which not only calls for preservation of existing wetlands, but an overall net gain of functions and acreage. ...”*

Response #2 (Biology): Mitigation for this project will be implemented to ensure no overall net loss of wetland functions and values, pursuant to Executive Order W-59-93. Mitigation options that involve creation of additional wetlands would be given priority, but currently Caltrans is reviewing all viable mitigation options. Coordination with resource agencies would be conducted before a mitigation plan is ultimately chosen for the proposed project.

Comment #3 (Stormwater): *“The Regional Water Board strongly recommends utilizing Low Impact Development (LID) techniques to treat stormwater runoff.”*

Response #3 (Stormwater): Low Impact Development techniques will be incorporated into the design of a vegetated bioswale located adjacent to the State Route (SR) 1 south bound lane. A portion of the old SR 1 roadbed will be obliterated and replaced with a 400-foot vegetated bioswale. The bioswale will collect storm water runoff, promote infiltration, trap sediment and provide for pollutant removal. Please see page 3.

Comment #4 (Stormwater): *“BMP’s to prevent the release of sediment or hazardous materials during construction activities should be included in the Negative Declaration to prevent sediment laden storm water from reaching any streams.”*

Response #4 (Stormwater): Procedures to keep debris and sediment from entering watercourses are established in the Caltrans Construction Site Best Management Practices (BMP) Manual. Procedures for temporary soil stabilization BMPs include SS-1 “Scheduling”, SS-4 “Hydroseeding”, SS-5 “Soil Binders” and other soil stabilization procedures applied to disturbed soil. Sediment control practices that intercept, slow or detain the flow of storm water to allow sediment to be trapped are deployed under Temporary Sediment Control BMPs such as SC-1 “Silt fence”, SC-4 “Check Dams” SC-5 “fiber rolls”, SC-10 “Storm Drain Inlet Protection”. Waste Management and Materials pollution control which prevent pollution by limiting or reducing potential pollutants at their source before they come into contact with storm water are implemented under BMPs such as WM-2 “Stockpile Management”, WM-4 “Spill Prevention and Control”, and WM-8 “Concrete Waste Management”.

In order to prevent the release of sediment or hazardous materials during construction activities, Plans, Specifications, and Estimates (PS&E) for the project will include language to address storm water management and water quality protection measures. Standard special provisions (SSP) 07-345, requires the contractor to develop a SWPPP. It also addresses other potential temporary water quality impacts. SSP 07-346, Construction Site Management, will address pollution source control issues. Non-standard special provisions (nSSPs) may be developed to address circumstances that may lead to impacts, such as project-specific conditions imposed by permits.

Comment #5 (Stormwater): *“Land disturbances on projects of one acre or more require coverage under the construction general storm water permit.”...*

Response #5 (Stormwater): The project’s approximate disturbed soil area is greater than one-acre, and will therefore require coverage under the Construction General Permit and will be constructed under a contractor prepared Storm Water Pollution Prevention Plan (SWPPP).

Comment Letter 3 – Mendocino County Department of Planning and Building Services



COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
790 SOUTH FRANKLIN STREET • FORT BRAGG • CALIFORNIA • 95437

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January 5, 2011

Chris Carroll
Associate Environmental Coordinator
California Department of Transportation - District 3 North Region
Environmental Planning
703 "B" Street
Marysville, CA 95901

Subject: Highway 1 Seaside Creek Storm Damage Repair Project Mitigated Negative Declaration Draft

Dear Mr. Carroll:

Thank you for allowing Mendocino County the opportunity to comment on the Draft Mitigated Negative Declaration for the proposed Highway One Seaside Creek Storm Damage Repair Project. My comments are as follows:

1. The project is located in a Highly Scenic Area. Section 20.504.015(12) of the Mendocino County Coastal Zoning Code requires:

Power distribution lines shall be placed underground in designated "highly scenic areas" west of Highway 1 and in new subdivisions. East of Highway 1, power lines shall be placed below ridgelines if technically feasible.

When applying for the Coastal Permit, please provide details on utility relocation.

2. The Draft Mitigated Negative Declaration (MND) indicates that a bicycle detour is planned. Please indicate details of the detour location.
3. The temporary construction easement appears to be located in agricultural land, the flood plain, in wetlands, and would appear to require removal of a wooded riparian area at the inlet of the culvert located at approx. PM 70.65 (please see attached map from CDP 26-2008 for the Coastal Land Trust). Is there a less impacting location available?
4. The Coastal Land Trust has plans to improve parking on the east and west sides of the highway for about a 300 foot strip in the vicinity of the existing Seaside Beach parking area. Can Caltrans coordinate with the Coastal Land Trust on paving improvements in this area, allowing for additional room for bicycle lanes?
5. Will the existing fence on the east side require reconstruction? If so, will the location and materials be similar to the existing?

Sincerely,

A handwritten signature in dark ink, appearing to read "Teresa Spade".

Teresa Spade
Planner II

Responses to Comment Letter 3 – Mendocino County Department of Planning and Building Services

Comment #1 The project is located in a highly scenic area. Section 20.504.015 (12) of the Mendocino County Coastal Zoning Code Requires:

Power distribution lines shall be placed underground in designated “highly scenic areas” west of Highway 1 and in new subdivisions. East of Highway 1, power lines shall be placed below ridgelines if technically feasible.

When applying for the Coastal Permit, please provide details on utility relocation.

Response #1: PG & E underground lines are not in conflict with this project. There is one overhead AT & T power line and pole that may be in conflict, therefore, relocation may be required.

Comment #2: The Draft Mitigated Negative Declaration (MND) indicates that a bicycle detour is planned. Please indicate details of the detour location.

Response #2: No detours for bicycles are planned, except, for the Traffic Management Plan (TMP), which specifies that bicycles (and pedestrians) shall either be flagged or ferried across using a pilot vehicle separate from vehicular traffic. Signs will be provided at each end of the work zone before they are allowed to cross, or to obtain instruction from designated personnel handling pilot vehicle transport.

Comment #3: The temporary construction easement appears to be located in agricultural land, in a flood plain, wetlands, and would appear to require removal of a wooded riparian area at the inlet of the culvert located at approximately post mile 70.65. Is there a less impacting location available?

Response #3: Temporary Construction Easements (TCE's) were removed from the Right-of-Way appraisal map. For the area in question at post mile 70.65, a private driveway had been planned on the east side, but that has since been removed in favor of a turnout on the east side near post mile 70.62.

Comment #4: The Coastal Land Trust has plans to improve parking on the east and west sides of the highway for about a 300 foot strip in the vicinity of the existing Seaside Beach parking area. Can Caltrans coordinate with the Coastal Land Trust on paving improvements in this area, allowing for additional room for a bicycle lane?

Response #4: Plans to improve parking on the east and west sides of the highway at Seaside Beach have been removed, and a standard 4 ft. shoulder will be placed which should be able to accommodate bicycles.

Comment #5: Will the existing fence on the east side require reconstruction? If so, will the location and materials be similar to the existing?

Response #5: Existing fence on the east side will likely be replaced with materials similar to the existing fence.

Comment 4 – Bill Popow

Comment: Bill Popow e-mailed Susan D. Bauer on 12/22/10 stating his support for plans to include a bicycle lane as part of this project.

Response to Comment 4 – Bill Popow

Response : An e-mail received from the Project Engineer on this issue states: “We currently do not have a bicycle lane. But, the addition of 4 ft. shoulders will provide enough room to use as a bicycle lane.

Chapter 4 - List of Preparers

The following Caltrans North Region staff contributed to the preparation of this Initial Study:

Chris Carroll, Associate Environmental Planner. Contribution: Environmental Coordinator and Document Writer

Susan D. Bauer, Senior Environmental Planner. Contribution: Environmental Branch Chief

Jeff Haney, Associate Environmental Planner (Archeology). Contribution: Historic Property Survey Report

Jennifer Olah, Associate Environmental Planner (Natural Sciences). Contribution: Project Biologist, Natural Environmental Study (NES)

Melanie Collins, Project Engineer. Contribution: Preparation of Design Plans

Frank Demling, Project Manager. Contribution: Project Coordination

Mark Melani, Transportation Engineer. Contribution: Hazardous Waste Initial Site Assessment (ISA)

Jim Hibbert, Landscape Architect. Contribution: Visual Impact Analysis

Sharon Tang, Air Quality Specialist. Contribution: Air Quality Study

Saeid Zandian, Noise Specialist, Contribution: Noise Study

Alex Arevalo, Transportation Engineer. Contribution: Water Quality Study

Kathy Gallegher, Transportation Engineer. Contribution: Geotechnical Report

Frank Demling, Project Manager. Contribution: Project Management

Monica Shell, Land Surveyor. Contribution: Project Surveys

Oscar Vasquez, Sr. Transportation Engineer. Contribution: Project Design

Appendix A: CEQA Checklist

CEQA Environmental Checklist

01-MEN-1

PM 70.2/70.8

03-0000-0331-1

01-474901

Dist.-Co.-Rte.

P.M/P.M.

E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact and Less Than Significant Impact"
determinations in this section are based on the Visual Impact Assessment

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the project scope and field reviews

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the Air Quality Report

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>"Less Than Significant with Mitigation" determinations in this section are based on the project scope and field reviews</i>				
<i>"No Impact" determinations in this section are based on the project scope and field reviews</i>				
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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“Less Than Significant with Mitigation” determinations in this section are based on the project scope, archeological reports and field reviews

“No Impact” determination in this section is based on the project scope and field reviews

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” and “Less Than Significant Impact” determinations in this section are based on Geotech Studies and field reviews,

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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VII. GREENHOUSE GAS EMISSIONS: Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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“No Impact” determinations in this section are based on project scope and field reviews and review of the Naturally Occurring Asbestos (NOA) and Total Petroleum Hydrocarbon (TPH) Survey Reports

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” and “Less Than Significant” determinations in this section are based on the Water Quality Study and the Drainage Report,

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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X. LAND USE AND PLANNING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

"No Impact" determinations in this section are based on the project scope and field reviews

XI. MINERAL RESOURCES: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

"No Impact" determinations in this section are based on the project scope and field reviews

XII. NOISE: Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the project scope and field reviews

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the project scope and field reviews

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the project scope and field reviews

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XV. RECREATION:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the project scope and field reviews

XVI. TRANSPORTATION/TRAFFIC: Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

"No Impact" determinations in this section are based on the project scope and field reviews

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Appendix B: Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
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*Flex your power!
Be energy efficient!*

August 25, 2009

TITLE VI POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in blue ink that reads "Randell H. Iwasaki".

RANDELL H. IWASAKI
Director

"Caltrans improves mobility across California"

Appendix C: Minimization and/or Mitigation Summary

1. Avoidance / Minimization Measures:

Hazards and Hazardous Materials

If removal of yellow thermoplastic and/or paint striping is done as an independent action, then SSP 15-300 will be required.

Biology

Invasive Species

The Coastal Land Trust is currently conducting a project to eradicate knotweed (either Japanese knotweed (*Polygonum cuspidatum*) or giant knotweed (*P. sachalinense*)) from their property, located adjacent to the proposed project. Caltrans would coordinate with the Coastal Land Trust during construction to avoid the spread of this species.

Maple-Leaved Checkerbloom

One of the maple-leaved checkerbloom plants would be impacted by the construction of this project. This plant is located on the Coastal Land Trust's parcel. During the fall prior to the start of construction (estimated to be fall 2012), the maple-leaved checkerbloom plant that would be impacted by construction would be relocated outside of the footprint of the construction project. The plant would be monitored for the duration of construction.

The two remaining maple-leaved checkerbloom populations would be designated as ESAs and would be protected during construction of the proposed project.

Tide Water Goby-Chinook Salmon-Central California Coast Coho Salmon-Northern California Steelhead

The implementation of the following avoidance measures would protect the Tidewater Goby, Chinook Salmon, Central California Coast Coho Salmon, Northern California Steelhead and its habitat during construction of the proposed project;

Construction would occur between May 15 and October 15 of any construction season in order to minimize runoff during construction and to allow adequate time to

restore and revegetate the sites following construction and prior to the onset of winter precipitation.

Standard water quality Best Management Practices (BMPs) would be implemented in order to minimize the potential for erosion into waterbodies

Prior to onset of construction, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared. The SWPPP would prescribe BMPs, appropriate to each culvert, in keeping with the BMPs described in Caltrans' Water Quality Handbook. A copy of the SWPPP would be sent to NOAA Fisheries at least 15 days prior to the start of construction.

Areas disturbed for access and construction would be stabilized and revegetated at the completion of construction in order to minimize erosion and restore functions and values of the habitat.

Western Snowy Plover

To avoid impacts to the western snowy plover and potential nesting habitat on Seaside Beach dune habitat outside of the construction footprint would be designated as ESAs and would be protected during construction. These ESA areas would be off limits to vehicles, construction staging materials, and construction related activities. Orange construction fencing would be installed between SR 1 and the dunes to clearly identify the limits of dune habitat and prevent trucks and equipment from parking in these areas.

Sensitive Amphibians (Northern red-legged Frog and Foothill yellow legged frog)

Prior to the start of construction, a qualified biologist would conduct training for all construction personnel regarding sensitive amphibians. The training would include a description of the species and their respective habitats and the general measures that are being implemented to avoid and minimize impacts to the species.

A qualified biologist would survey the work site for sensitive amphibians no more than 48 hours before the onset of ground disturbing activities.

If sensitive amphibians are found during preconstruction surveys and do not leave the work area on their own, CDFG would be contacted. Methods to protect discovered

amphibians may include relocation of the amphibian and/or exclusion buffers. If CDFG approves of moving the amphibian (s), a biologist with a scientific collecting permit would be allowed sufficient time to move the amphibians from the work site before activities begin.

Special Status Invertebrates (Globose Dune Beetle and the Ten Mile Shoulderband)

To avoid impacts to the globose dune beetle and the Ten Mile shoulderband and their habitat dune habitat outside of the construction footprint would be designated as ESAs and would be protected during construction. These ESA areas would be off limits to vehicles, construction staging materials, and construction related activities. Orange construction fencing would be installed between SR 1 and the dunes to clearly identify the limits of dune habitat and prevent trucks and equipment from parking in these areas.

The proposed revegetation measures for all disturbed soils, including the use of native species, soil amendments, and “weed free” mulch, reduces the risk of introducing noxious weeds. The contract specifications for permanent erosion control would require the use of California native forb and grass species, from the same elevation and geographic area as the project site. All areas disturbed by construction would be treated with a seed mix comprised of local native grasses and forbs. Soils would be amended with compost containing long-term soil nutrients and slow-release organic fertilizers to provide nutrients over the first year. Mulches used on the project would be from source materials that would not introduce exotic species.

Migratory Birds

Migratory birds may nest in trees and riparian vegetation within the project limits. To avoid impacts to birds nesting in trees and riparian vegetation within the project limits, trees and riparian vegetation would be removed from September 1 through February 1, which would be outside the migratory bird nesting season. If removal of trees and riparian vegetation within the time period of September 1 through February 1 is not feasible, a pre-construction survey for active bird nests would be conducted by a qualified biologist prior to the start of construction. If an active bird nest is found, construction would not begin at that location until after the chicks have fledged.

Wetlands

During the design of this project, efforts were made to avoid or minimize impacts to wetlands and other waters of the U. S. present within the BSA. The driveway for the Coastal Land Trust's property was to be relocated to the north end of the BSA, where a wetland/pond is located. To minimize impacts to this wetland area, the driveway would now consist of a pull-out rather than a full driveway and was relocated to the south.

Wetlands and other waters of the U. S. adjacent to the construction zone that would not be filled as a result of the proposed project would be designated as ESAs and would be fenced to protect the area from inadvertent damage.

In order to prevent impacts to water quality during construction, the Contractor would be required to adhere to the standards and objectives for minimizing water pollution impacts set forth in Section 7-1.01G of the Caltrans Standard Specifications.

Cultural Resources

In order to eliminate or minimize the potential to affect those portions of CA-MEN-1818/H and CA-MEN-3382/H outside of the ADI, Caltrans will protect these areas by designating them as Environmentally Sensitive Areas (ESAs), which shall be described in information included in the final construction plans of the Undertaking. These areas will be enclosed within temporary plastic ESA fencing with laminated "Keep Out" signs. Caltrans shall further ensure that: 1) construction activities within 50 feet of the properties shall be monitored by an archaeologist and Native American monitor; and 2) the integrity of the fence line as installed will be monitored by the archaeologist throughout the duration of the construction activities in the vicinity of the sites.

Within 30 days after Caltrans has determined that all fieldwork required under stipulation II has been completed, Caltrans will ensure preparation, and concurrent distribution to the other MOA parties, for review and comment, a brief letter report that summarizes the field efforts and the preliminary findings that result from them.

Within 12 months after Caltrans has determined that all fieldwork required by stipulation II.A has been completed, Caltrans will ensure preparation, and subsequent concurrent distribution to the other MOA parties, for review and comment, a draft technical report that documents the results of implementing and completing the DRP

and any addendum to the DRP. The other MOA parties will be afforded 30 days following receipt of the draft technical report to submit any written comments to Caltrans. Failure of these parties to respond within this time frame shall not preclude Caltrans from authorizing revisions to the draft technical report, as Caltrans may deem appropriate. Caltrans will provide the other MOA parties with written documentation indicating whether and how the draft technical report will be modified in accordance with any comments received from the other MOA parties. Unless any MOA party objects to this documentation in writing to Caltrans within 30 days following receipt, Caltrans may modify the draft technical report, as Caltrans may deem appropriate.

Copies of the final technical report documenting the results of DRP implementation will be distributed by Caltrans to the other MOA parties, to the Northwest Information Center of the California Historic Resources Information System (CHRIS), and to the Noyo River Indian Community and Sherwood Valley Rancheria.

If Caltrans determines during the implementation of the DRP or after construction of the Undertaking has commenced, that either the implementation of the DRP or the Undertaking will affect a previously unidentified property that may be eligible for the National Register, or affect a known historic property in an unanticipated manner, Caltrans shall address the discovery or unanticipated effect in accordance with 36 CFR § 800.13(b). Caltrans at its discretion may hereunder and in accordance with 36 CFR § 800.13(c), assume any discovered property to be eligible for inclusion in the National Register.

Hydrology and Floodplain

Replace the existing culvert at PM 70.65 with a 48" Alternative Pipe Culvert (APC).

Place rock slope protection at the culvert outlet as designed in the California Bank and Shore Rock Slope Protection Manual

Place a debris rack at the culvert inlet.

Geology/Soils/Seismic/Topography

An Erosion Control Plan would be required: permanent erosion control would be applied on all disturbed soil surfaces as recommended by the District Landscape Architect.

Re-vegetated surfaces would utilize the seed mixture, mulch, tackifier, and fertilizer recommended by the District Landscape Architect.

Rock slope protection would be placed above the embankment slope for stabilization.

Permanent erosion control shall be applied on all disturbed soil surfaces as recommended by the District Landscape Architect.

Visual and Aesthetics

The steel I-Beams and the concrete walers on the soldier pile tieback wall should be stained dark brown to match the color of the timber infill. A new chemical stain for MBGR has been approved for use on state highway projects. The PDT should consider the use of this treatment upon consultation of the Coastal Commission and the Mendocino County planning department.

2. Mitigation Measures:

Wetlands

Temporary impacts to wetlands and other waters of the U. S. would be mitigated through the restoration of the project area to pre-project conditions. Wetlands that are temporarily impacted during construction would be revegetated upon completion of project construction. Seeds or plant material from species that are appropriate for the project vicinity would be planted in these areas.

Permanent impacts to wetlands and waters of the U.S. would be mitigated by creating wetlands where the existing highway is realigned to the east, adjacent to existing wetlands, or by creating wetlands at a USACE or CCC approved location off-site, or through a combination of these efforts. Mitigation may also include restoration of wetlands, including removal of invasive plant species, on the adjacent Coastal Land Trust.

A Mitigation and Monitoring Plan (MMP) would be developed for the project and would outline the measures listed above as well as any new measures deemed appropriate given the final engineering drawings for the project.

Cultural Resources

Caltrans will resolve potential adverse effects to the sites by executing a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO). The MOA, which includes stipulations to take into account the proposed project's effects on historic properties, calls for (1) archaeological excavations within the impacted portion of CA-MEN-1818/H as detailed in a data recovery plan and (2) establishment of ESAs to protect those portions of CA-LAK-1818/H and -3382/H outside of the ADI from inadvertent damage during project construction.

The MOA was recently signed by Milford Wayne Donaldson (the SHPO) and Jay Norvell, Chief, Division of Environmental Analysis, for Caltrans. Concurring parties to the MOA include Caltrans District 01, the Sherwood Valley Rancheria of Pomo Indians, and Noyo River Indian Community.

Appendix D: List of Technical Studies

Initial Site Assessment (Hazardous Waste, Caltrans 2007)

Natural Environmental Study (Biology, Caltrans 2010)

Archeological Evaluation (Archeology, Caltrans 2010)

Water Quality Assessment Exemption (NPDES, Caltrans 2010)

Landscape Assessment (VIA, Caltrans 2010)

Noise Assessment (Noise Report, Caltrans 2010)

Drainage Recommendations (Drainage Report, Caltrans 2010)

Geotech Study (Caltrans 2008)